

**Report to the Pennsylvania General Assembly
on the Research and Development (R&D)
Tax Credit**



The Pennsylvania Department of Revenue

Bureau of Research

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The Pennsylvania R&D Tax Credit Statute

On May 7, 1997, Act 7 of 1997 created the Pennsylvania research and development (R&D) tax credit. The R&D tax credit provision became Article XVII-B of the Tax Reform Code of 1971 (TRC). The intent of the R&D tax credit was to encourage taxpayers to increase R&D expenditures within the Commonwealth in order to enhance economic growth. The terms and concepts used in the calculation of the Commonwealth’s R&D tax credit are based on the federal government’s R&D tax credit definitions for qualified research expense.¹

For R&D tax credits awarded between December 1997 and December 2003, Act 7 of 1997 authorized the Department of Revenue (Department) to approve up to \$15 million in total tax credits per fiscal year. Additionally, \$3 million of the \$15 million was set aside for “small” businesses, where a “small business” is defined as a “for-profit corporation, limited liability company, partnership or proprietorship with net book value of assets totaling...less than five million dollars (\$5,000,000).”

Over the years, several changes have been made to the R&D tax credit statute. Table 1 lists all of the acts that have changed the R&D tax credit statute, along with the applicable award years, the overall tax credit cap and the “small” business set aside.

**Table 1. Pennsylvania Research & Development Tax Credit Program
History of R&D Tax Credit Legislation**

Legislation	Award Years	Total Tax Credit Cap	Small Business Set Aside
Act 7 of 1997	1997 - 2003	\$15.0 million	\$3.0 million
Act 46 of 2003	2004 - 2005	\$30.0 million	\$6.0 million
Act 116 of 2006	2006 - 2008	\$40.0 million	\$8.0 million
Act 48 of 2009	2009	\$20.0 million	\$4.0 million
Act 48 of 2009	2010	\$18.0 million	\$3.6 million
Act 26 of 2011 ²	2011 - 2016	\$55.0 million	\$11.0 million
Act 85 of 2012 ³	Sunset Date Repealed	Unchanged	Unchanged

One of the more noteworthy features of the R&D tax credit program is the ability for R&D tax credit recipients to sell unused tax credits to other taxpayers. Act 46 of 2003 allowed R&D tax credit recipients to apply to the Department of Community and Economic Development (DCED) to sell or assign an R&D tax credit if there has been no claim for allowance filed within one year from the date that the Department approved the credit. According to Act 48 of 2009, for R&D tax credits awarded in December 2009 and forward, the one year holding period is no longer in effect; credits awarded in 2009 and forward can be sold immediately. The

¹ Public Law 99-514, 26 U.S.C. § 41.

² The prior sunset date was established by Act 116 of 2006.

³ Act 85 of 2012 repealed the sunset date for the R&D tax credit.

purchaser or assignee must still use the newly obtained R&D tax credit in the taxable year in which the purchase or assignment of the credit is made. The purchased or assigned R&D credit cannot be used to offset more than 75 percent of a tax liability for a taxable year. The purchased or assigned credit cannot be carried over, carried back, resold or refunded. The provision to sell or assign unused R&D tax credits applies to credits awarded in December 2003 and forward, but the initial sale or assignment could not take place until at least December 2004.

The R&D tax credit may be claimed against the following taxes: the capital stock and franchise tax (CSFT), the corporate net income tax (CNIT) and the personal income tax (PIT). Taxpayers claiming the credit against any of these taxes may not reduce their tax liability for taxable years 2004 and earlier by more than 50 percent. Act 46 of 2003 eliminated this provision starting with tax year 2005; a taxpayer is able to use the awarded R&D tax credit to reduce a given tax liability by up to 100 percent. Taxpayers awarded R&D tax credits by the Department may carry over and apply any unused tax credit for up to fifteen (15) succeeding taxable years.

The Pennsylvania R&D tax credit, which is calculated using the increase over the taxpayer's base year research expenses for qualified R&D conducted within Pennsylvania, originally generated a tentative credit at the rate of 10 percent. However, Act 116 of 2006 increased the rate at which the tentative R&D tax credit is calculated to 20 percent for small businesses only beginning with the credit awarded in December 2006 and forward.

Taxpayers must submit an application to the Department by September 15th to apply for the R&D tax credit. The credit is for qualified Pennsylvania research expenditures made in the taxable year ending in the prior calendar year. The Department has until December 15th to notify taxpayers of their approved tax credit amount.

Under Act 7 of 1997, the R&D tax credit provisions were to sunset for taxable years ending after December 31, 2004. Act 89 of 2002 extended the sunset date for the program until December 31, 2006. Act 116 of 2006 further extended the sunset date for R&D tax credit program for taxable years ending before January 1, 2016. Lastly, Act 85 of 2012 repealed the sunset date for the R&D tax credit program, making the R&D tax credit a permanent part of the TRC.

Major R&D Tax Credit Provisions in Act 46 of 2003

Act 46 of 2003 mandated that the Department report to the General Assembly the names of all taxpayers awarded R&D tax credits in each year starting in 2004 and for each year thereafter. Appendix A at the end of this report lists the name of each taxpayer receiving the R&D tax credit from the Department in December 2010, 2011 and 2012, along with the amount of credit received and utilized. In an effort to control the size of the document, this report will only list the names of taxpayers who have received the R&D tax credit in the current year and the two preceding years. Reports from earlier years will still be available that retain information on earlier years.

The other major change in the R&D tax credit program made by Act 46 of 2003 was the creation of the R&D Tax Credit Assignment Program. The program, which is primarily administered by DCED, permits taxpayers with unused R&D tax credits to sell them for cash to other taxpayers who can use them. The goal of the program is to "assist the growth and development of technology-oriented businesses, particularly small start-up technology businesses."⁴ These small start-up firms, which often do not have significant tax liabilities in their early years, receive cash for their unused R&D tax credits.⁵ The purchasers of the unused R&D tax credits are then able to partially offset their own tax liabilities with the unused credits.

⁴ "Research and Development Tax Credit Assignment Program Guidelines," DCED, September 2004.

⁵ "Unused R&D tax credits" means that the taxpayer has not applied the tax credits against a specific tax year liability. Further, the taxpayer cannot sell the tax credit if it has any unpaid liabilities against which the tax credit could be used.

The earliest that unused R&D tax credits could be sold was December 2004, for credits awarded by the Department in December 2003. Taxpayers can only sell unused amounts of tax credits that exceed any collectible tax liability against which the credit may be offset. S Corporations may not apply to sell or assign any credit that has been passed-through to its shareholders. In order to sell an unused credit, the taxpayer must file an application with DCED. The application identifies the seller and the R&D tax credit that it intends to sell, along with the buyer and the amount for which the credit is being sold or assigned.

The buyer of the unused R&D tax credit can use it to offset up to 75 percent of a qualified tax liability in a tax year. The buyer cannot carry forward, carry back, get a refund for or reassign the purchased credit. Further, the buyer must use the purchased tax credit against a qualified tax liability in the taxable year in which it was transferred. Lastly, the buyer must identify to the Department the taxpayer from which they bought the unused R&D tax credit.

An R&D tax credit will be considered to be unused and, therefore, available for sale as long as it is not applied against a specific tax year liability and the taxpayer does not have a collectible tax liability. As of February 2013, about \$50.6 million of the \$288 million R&D tax credit awarded between December 2003 and December 2011 has been sold or assigned. Purchasers of those unused tax credits have paid about \$47.5 million for them in total, or approximately 93.8 percent of the value of those unused tax credits.

Tax credit sales are often arranged by a broker, who provides a service by bringing together sellers and buyers of credits, and in return takes a portion of the tax credit as their fee. The Department does not have complete data about these arrangements. However, DCED staff has stated that the level of broker fees can vary widely, but the average broker fee is in the range of 5 to 6 percent of the value of the credit.

The complete statistics on sold or assigned unused tax credits by award year are shown in Table 2.

**Table 2. Pennsylvania Research & Development Tax Credit Program
Complete Statistics on the Sale or Assignment of Unused R&D Tax Credits**

(\$millions)

Credit Awarded In	R&D Credit Awarded	Unused Tax Credits Sold/Assigned	Number of Taxpayers Sold/Assigned Unused Credit	Unused Tax Credits Sold For	Percent of Value Unused Tax Credits Sold For
Dec 2003	\$15.0	\$1.3	18	\$1.1	91.4%
Dec 2004	\$30.0	\$3.6	43	\$3.2	89.8%
Dec 2005	\$30.0	\$9.0	48	\$8.4	93.3%
Dec 2006	\$40.0	\$8.2	69	\$7.7	93.9%
Dec 2007	\$40.0	\$8.5	81	\$8.1	95.6%
Dec 2008	\$40.0	\$8.8	108	\$8.3	94.5%
Dec 2009	\$20.0	\$4.7	90	\$4.4	93.7%
Dec 2010	\$18.0	\$2.4	85	\$2.3	93.7%
Dec 2011	\$55.0	\$4.2	59	\$3.9	94.4%
TOTAL	\$288.0	\$50.6		\$47.5	93.8%

R&D Tax Credit Claimed and Awarded in Pennsylvania for December 2012

Table 3 shows the amount of R&D tax credit awarded by the Department in 2012 for qualified research expenditures made by taxpayers in Pennsylvania in taxable year 2011. Without the \$55 million cap, almost \$107 million in credit would have been awarded to 569 taxpayers. 76 percent of approved taxpayers received an R&D tax credit of less than \$50,000, receiving 11.6 percent of the total amount of approved credit. Taxpayers with an approved R&D tax credit of \$50,000 or more claimed 88.4 percent of the approved credit

amount. The 136 taxpayers receiving \$50,000 or more in credit represented 24 percent of the total number of applicants.

**Table 3. Pennsylvania Research & Development Tax Credit Program
Tentative and Actual Credit for Tax Year 2012⁶**

Actual Credit Range	Number of Applicants	Percent of Applicants	Tentative Credit Amount	Actual Credit Amount	Percent of Actual Credit
\$0 - \$4,999	120	21.1%	\$509,150	\$296,230	0.5%
\$5,000 - \$19,999	192	33.7%	\$3,259,324	\$2,133,913	3.9%
\$20,000 - \$49,999	121	21.3%	\$5,984,036	\$3,938,275	7.2%
\$50,000 - \$99,999	65	11.4%	\$7,028,061	\$4,471,300	8.1%
\$100,000 - \$499,999	57	10.0%	\$19,239,052	\$10,125,786	18.4%
\$500,000 - \$999,999	7	1.2%	\$11,342,326	\$5,441,089	9.9%
\$1,000,000 & greater	7	1.2%	\$59,604,933	\$28,593,407	52.0%
TOTAL	569	100%	\$106,966,882	\$55,000,000	100%

Table 4 details the tentative amount of R&D tax credit awarded by the Department for each year in the history of the R&D tax credit program.

**Table 4. Pennsylvania Research and Development Tax Credit Program
Total Tentative Tax Credit Awarded By Year**

Credit Awarded In	Number of Applicants	Tentative Credit Amount	Credit Awarded In	Number of Applicants	Tentative Credit Amount
Dec 1997	292	\$66,371,038	Dec 2005	291	\$65,806,128
Dec 1998	270	\$56,572,339	Dec 2006	379	\$78,640,025
Dec 1999	275	\$53,456,489	Dec 2007	439	\$94,732,918
Dec 2000	284	\$59,207,493	Dec 2008	466	\$90,712,865
Dec 2001	293	\$71,407,604	Dec 2009	507	\$80,208,000
Dec 2002	254	\$74,255,800	Dec 2010	488	\$94,419,561
Dec 2003	242	\$70,191,922	Dec 2011	537	\$130,551,357
Dec 2004	274	\$70,932,913	Dec 2012	569	\$106,966,882

From its inception through December 2012, the R&D tax credit program has awarded a total of \$433 million in tax credit to 1,904 different taxpayers. Without any caps on annual awards, \$1,264.4 million in R&D tax credit would have been awarded to those same 1,904 taxpayers. Over the years, the varying annual credit caps have reduced the amount of R&D tax credit that would have been awarded to 34.2 percent of what was requested.

Table 5 presents the R&D tax credit awarded in December 2012 by business type.

⁶ Detail may not add up due to rounding; 124 other applicants were rejected and did not receive any credit.

**Table 5. Pennsylvania Research and Development Tax Credit Program
Actual Credits by Business Type in 2012**

Business Type	Number of Taxpayers	Percent of Taxpayers	Amount of Actual Credit	Percent of Actual Credit
Manufacturing	318	55.9%	\$42,250,705	76.8%
Services	180	31.6%	\$9,092,010	16.5%
Misc. ⁷	71	12.5%	\$3,657,285	6.6%
TOTAL	569	100%	\$55,000,000	100%

Manufacturers represented almost 56 percent of the taxpayers receiving the tax credit in 2012, claiming almost 77 percent of the total amount of approved credit. Pharmaceutical manufacturers claimed the largest single share; the 17 pharmaceutical manufacturers requesting credit were awarded \$26.9 million in credit. Another large group of credit recipients included 41 computer-related companies in the service sector. They claimed almost \$1.5 million in credit in 2012.

Table 6 provides a breakdown of the R&D tax credit claimed by “small” and “not small” businesses in December 2012. As noted earlier, “small” businesses are those with net book assets of less than \$5 million.

**Table 6. Pennsylvania Research and Development Tax Credit Program
Small and Not Small Businesses in 2012**

Business Size	Number of Applicants	Percent of Applicants	Tentative Credit Amount	Actual Credit Amount	Percent of Actual Credit
Small	242	42.5%	\$7,085,229	\$7,085,229	12.9%
Not Small	327	57.5%	\$99,881,653	\$47,914,771	87.1%
TOTAL	569	100%	\$106,966,882	\$55,000,000	100%

In December 2012, “small” businesses claimed slightly over \$7.0 million of the \$11.0 million in R&D tax credit set aside for them, i.e., “small” businesses received 100 percent of the credit for which they applied. Last year, “small” businesses also received the entire amount of credit for which they applied, about \$7.6 million in R&D tax credit. The \$55 million program cap reduced the amount of credit approved for the “not small” businesses to 48 percent of the requested amount. Last year, “not small” businesses received 38.5 percent of the amount of credit they requested.

Table 7 shows the history of the R&D tax credit for the “small” business set aside.

⁷ Misc. business type includes business activities associated with individuals or corporations with North American Industry Classification System (NAICS) codes for the agriculture, construction, mining, utilities, wholesale trade, retail trade, and financial sectors.

**Table 7. Pennsylvania Research and Development Tax Credit Program
Small Business Set Aside By Year**

Credit Awarded In	Number of Applicants	Tentative Credit Amount	Actual Credit Amount
Dec 1997	67	\$889,054	\$889,054
Dec 1998	85	\$1,821,354	\$1,821,354
Dec 1999	82	\$3,001,986	\$3,000,000
Dec 2000	83	\$1,545,359	\$1,545,359
Dec 2001	75	\$1,373,382	\$1,373,382
Dec 2002	79	\$1,615,602	\$1,615,602
Dec 2003	81	\$1,082,263	\$1,082,263
Dec 2004	94	\$1,419,845	\$1,419,845
Dec 2005	108	\$2,268,046	\$2,268,046
Dec 2006	173	\$7,081,079	\$7,081,079
Dec 2007	193	\$6,845,879	\$6,845,879
Dec 2008	205	\$8,052,975	\$8,000,000
Dec 2009	211	\$8,688,383	\$4,000,000
Dec 2010	213	\$8,487,767	\$3,600,000
Dec 2011	217	\$7,632,711	\$7,632,711
Dec 2012	242	\$7,085,229	\$7,085,229

“Small businesses” have been awarded \$59.3 million of the \$68.9 million in R&D tax credits that they have applied for since the inception of the R&D tax credit program; they have received about 86 percent of the total amount of tax credits for which they applied. A total of \$86.6 million in tax credit was set aside for them over this period.

Four times in the history of the R&D tax credit program the “small” business set aside has been awarded in total: 1999, 2008, 2009 and 2010. Most years, the “small businesses” have received the total amount of tax credit for which they applied. When “small” businesses claim less than the R&D credit set aside for them, the “not small” businesses receive a pro-rated amount of the excess R&D tax credit not claimed by the “small” businesses.

Table 8 shows the amount of R&D tax credit that has been applied against the CNIT, CSFT and PIT for taxable years 1997 through 2010. The data in Table 8 are for taxpayers that have directly received the tax credit from the Department, as well as those taxpayers that have purchased unused R&D tax credits.

The first taxable year against which the credit could be used was 1997. For PIT, individuals who received the credit directly are included, as are any individual owners of S corporations or limited liability companies (LLCs) who received the pass-through benefit. All credit amounts are as of February 2013.

Table 8 shows the distribution of the R&D tax credits that have been applied to specific tax years. As of February 2013, 89 percent of the \$323 million in R&D tax credit that has been awarded for 1997 through 2010

has been applied to specific tax periods. About 45.7 percent of the credit awarded has been applied to the CSFT; 49.5 percent has been applied to the CNIT. Approximately 4.8 percent of the credit awarded that has been applied has been applied to the PIT. Also, it is important to note that the amount of tax credit applied to a particular taxable year can vary over time as a taxpayer’s taxable year liability may change due to settlement, resettlement or the application of other credits.

**Table 8. Pennsylvania Research and Development Tax Credit Program
Application by Tax Type and Taxable Year, 1997-2010**

Taxable Year	Corporate Net Income Tax	Number of Taxpayers	Capital Stock & Franchise Tax	Number of Taxpayers	Personal Income Tax	Number of Taxpayers
1997	\$4,808,403	93	\$3,654,425	192	\$187,863	91
1998	\$2,669,951	84	\$5,262,915	199	\$791,636	195
1999	\$3,129,320	91	\$6,317,818	233	\$439,671	162
2000	\$4,495,931	77	\$6,465,943	213	\$523,087	201
2001	\$6,364,344	82	\$7,141,332	217	\$534,126	173
2002	\$7,925,753	49	\$5,313,965	220	\$487,586	169
2003	\$8,733,454	62	\$8,086,269	217	\$337,985	154
2004	\$14,874,207	67	\$8,387,866	263	\$713,456	169
2005	\$12,630,586	66	\$13,164,168	291	\$1,389,912	179
2006	\$14,417,601	95	\$17,708,981	328	\$2,679,623	235
2007	\$15,221,106	104	\$12,720,361	356	\$1,799,924	236
2008	\$18,161,413	103	\$11,872,312	407	\$1,327,515	306
2009	\$8,400,724	91	\$12,438,217	480	\$1,460,930	211
2010	\$20,594,531	110	\$12,878,861	505	\$1,279,953	176
TOTAL	\$142,427,322		\$131,413,431		\$13,953,267	

It should be noted that it is possible that some portion of the R&D tax credit awarded by the Department might never be used against a tax year liability, particularly those credits not affected by the provisions of Act 46 of 2003. R&D tax credits awarded in December 1997, the first credits awarded under the program, will expire and cannot be used beyond tax year 2012. As of February 2013, of the \$15.0 million awarded to 292 taxpayers in December 1997, about \$265,000 has not yet been used. This amounts to about 1.8 percent of the total amount of R&D tax credits awarded. Since tax returns for tax year 2012 have not yet been submitted and processed, it is still possible that this amount of tax credit could be used, or that the amount could be used against tax years 1997 through 2011 if certain tax liabilities for those taxpayers were to change.

One possible reason for non-use of the tax credit is a reorganization in which a taxpayer claiming the credit goes out of existence or merges with another business before applying the credit against a tax liability. Another observation about usage of the tax credit is that, for taxable years prior to 2005, the amount of credit a taxpayer could claim against a tax type in one tax year was limited to 50 percent of the tax liability. This provision had ensured that a taxpayer could not totally eliminate a tax liability using only the R&D tax credit. However, Act 46 of 2003 eliminated the 50 percent limit. This fact, combined with the 15-year carryover, should allow taxpayers to receive most, if not all, of the tax benefit of the credit. Further, the provision in Act 46 of 2003 allowing the sale or assignment of any unused R&D tax credit awarded in December 2003 and after should minimize how much R&D tax credit is not utilized.

Current law reduces the CSFT rate each year until the tax is completely eliminated for taxable years beginning on or after January 1, 2014. Once the CSFT is eliminated, the R&D tax credit can no longer be claimed against it for tax year 2014 and forward. This is important for S corporations and LLCs that are primarily subject to the CSFT, not the CNIT. S corporations and LLCs may pass the tax credit through to shareholders who can claim it against their PIT. Therefore, S corporations and LLCs, in order to use the R&D tax credit after 2014, will have to either apply it against PIT or sell their unused tax credits. They will be able to carry it forward for up to 15 taxable years.

Taxes Paid by R&D Tax Credit Recipients

Table 9 shows the CNIT and CSFT liabilities for taxable year 2010 (the latest year for which reports are available for all taxpayers) for taxpayers receiving the R&D tax credit in 2012. Table 9 and Table 5 have a similar structure in order to provide comparability. Please note that taxpayers claiming the credit against the personal income tax are not included in these data. Also, taxpayers who purchased unused R&D tax credit are not included in these data.

**Table 9. Pennsylvania Research and Development Tax Credit Program
Taxable Year 2010 Tax Liabilities by Business Type**

Business Type	2010 CSFT Liability	2010 CNIT Liability
Manufacturing	\$11,356,323	\$53,598,825
Services	\$6,858,747	\$13,476,707
Misc.	\$3,711,734	\$7,529,614
TOTAL	\$21,926,804	\$74,605,146

In order to provide an idea of the relative value of the R&D tax credit to recipients, an analysis was conducted comparing the R&D tax credit awarded in 2012 to the total tax year 2010 self-assessed CNIT and CSFT liabilities⁸. Of the 569 taxpayers receiving the R&D tax credit in 2012 that are subject to the CNIT or CSFT, their total self-assessed 2010 tax year CNIT and CSFT liabilities totaled \$96.5 million. Though there are obviously varied ratios per individual taxpayer, the \$55 million in tax credit awarded in 2012 represents almost 57 percent of the total self-assessed tax amount for tax year 2010, while the \$107 million in tax credit requested represents almost 111 percent of the total self-assessed tax amount for tax year 2010.

The total 2010 CSFT liability for S corporations and LLCs receiving the R&D tax credit in 2012 was just about \$1.0 million. Out of the 210 Pennsylvania S corporations or LLCs, 66 had a CSFT liability of zero for 2010. The total 2010 CSFT liability for C corporations receiving the R&D tax credit in 2012 was \$21 million. Out of the 352 C corporations, 97 had a CSFT liability of zero for 2010.

The 352 C corporations receiving the tax credit in 2012 had a total taxable year 2010 CNIT liability of \$74.6 million. Of these companies, 228 were C corporations with a taxable year 2010 CNIT liability equal to zero, due to negative net income in taxable year 2010. In most cases, the income of Pennsylvania S corporations and LLCs is passed through to the individual owners and subject to the personal income tax.

Federal R&D Tax Credit Program

The federal government first adopted the R&D tax credit in 1981. The federal government does not cap the total credit amount that can be claimed in a taxable year. Despite the effort of some members of Congress, the R&D tax credit has never been a permanent part of the Internal Revenue Code (IRC). It has been extended fourteen times (most recently in December 2010). The current federal law expired on December 31, 2011.

⁸ In some cases, the tax liability may have been self-assessed and settled.

As long as the federal R&D tax credit is not repealed and removed from the IRC, the definition and terms remain in effect for state level calculations. However, when the federal R&D tax credit is lapsed, it is possible that the Commonwealth could lose applicants that, since they would not be able to file the federal forms, would not go through the trouble of filing the state forms. This would be especially true for companies that qualify for relatively small amounts of state R&D tax credits or for companies that face sizable fees from tax preparers for filing the state R&D tax forms.

The public policy goal of the R&D tax credit is to encourage the private sector to increase R&D spending, which in turn serves as a catalyst to economic growth by increasing productivity through the utilization of new technology. The credit is justified in economic theory on the basis of market failure, which occurs because firms may under-invest in R&D when they tend to not recoup all associated costs of investing in R&D. Hence, less R&D occurs than would be economically optimal for the economy as a whole. The R&D tax credit is a method for lowering the cost of R&D to private firms and increasing the return on investment. By increasing the rate of return on investment, the R&D tax credit encourages more R&D than would occur if the credit did not exist.

R&D Expenditures in Pennsylvania and the United States

In 1995, according to the National Science Foundation (NSF), private industry in Pennsylvania spent \$4,955 million on R&D expenditures. This was about 4.6 percent of the total R&D expenditures by private industry in 1995 in the United States (\$108,652 million).

By 2009⁹, the total amount of R&D expenditures in Pennsylvania by private industry had risen to \$9,989 million. This was an increase over the 14 year period of 101.6 percent. Over the same period, total R&D expenditures by private industry in the United States had risen by 145.6 percent to a level of \$266,884 million. For 2009, R&D expenditures in Pennsylvania by private industry were about 3.7 percent of total R&D expenditures by private industry in the United States. Pennsylvania ranked 9th in the entire US in R&D spending by private industry in 2009.

For comparison, the 569 R&D tax credit applicants in 2012 had total R&D expenditures in 2011 of \$4,129.3 million. Not all R&D done by industry in Pennsylvania is performed by R&D tax credit applicants. The R&D expenditures reported on the 2010 tax credit applications for businesses receiving the R&D tax credit, which were based on research expenditures in 2009, represented about 36 percent of the total R&D performed in Pennsylvania by industry as estimated by the NSF.

The most recent economic recession did have a negative impact on R&D spending by industry, particularly in Pennsylvania. According to NSF data, R&D spending by industry in Pennsylvania was \$10,387 million in 2007. However, due in large part to the recession, R&D spending by industry in Pennsylvania in 2008 fell by 6.3 percent to \$9,735 million. While the national level of R&D spending by industry did not fall in 2008, it did fall in 2009 by 8.2 percent according to NSF data.

Looking at the 569 taxpayers receiving the R&D tax credit in Pennsylvania in 2012, their 2008 R&D spending in Pennsylvania grew in 2008 over 2007 by 7.3 percent. However, this was considerably slower than the growth in their R&D expenditures for 2009 and 2010, which grew by 15.0 percent and 27.6 percent respectively.

A study released in April 2008¹⁰ by the R&D Credit Coalition, an organization of trade associations and companies dedicated to the permanent establishment of the federal R&D tax credit, examined the broad impact of the R&D tax credit in 2005. The study found that R&D spending by the private sector in 2005 in

⁹The most recent year for which state-level R&D spending is available from the National Science Foundation is 2009. <http://www.nsf.gov/statistics/states/show.cfm?stateID=53,39&year=0>

¹⁰ "Supporting innovation and economic growth: The broad impact of the R&D credit in 2005," Prepared by Ernst and Young LLP for the R&D Credit Coalition, April 2008.

Pennsylvania amounted to 1.97 percent of the private sector Gross State Product (GSP). For comparison, the study also found that R&D spending by the private sector in 2005 in the United States amounted to 1.88 percent of the private sector GSP.

According to a November 2009 study released by the Government Accountability Office (GAO), large corporations in 2005 dominated the use of the federal R&D tax credit, similarly mirroring usage of the R&D tax credit here in Pennsylvania. Further, the GAO found that the federal R&D tax credit in 2005 provided an average marginal incentive of between 6.4 to 7.3 percent. In other words, the federal R&D tax credit stimulated an additional amount of research spending in the United States of between 6.4 percent to 7.3 percent at the business level.¹¹

R&D Tax Credit Programs in Other States

A majority of states that have a corporate net income tax have sought to capture the potential benefits of encouraging R&D within their state by enacting an R&D tax credit. There are 33 other states besides Pennsylvania that provide for R&D tax credits. Most incorporate provisions of current or former R&D credits under the Internal Revenue Code.¹²

New Jersey's R&D tax credit is like Pennsylvania's in that it mirrors the federal R&D tax credit. However, New Jersey's R&D tax credit statute does not cap the total amount of credit that can be awarded in a year. Like the Pennsylvania R&D tax credit prior to Act 46 of 2003, there is a 50 percent cap on the amount of credit that a taxpayer can apply against its tax year liability. In fiscal year 2012, \$66.5 million in R&D tax credit was claimed in New Jersey. Additionally, the New Jersey R&D tax credit statute allows certain biotech and emerging technology companies to sell unused R&D tax credits to any company paying the corporate net income tax.¹³ After Act 46 of 2003, all companies receiving the Pennsylvania R&D tax credit, regardless of their business sector, can sell or assign any unused R&D tax credits awarded beginning in December 2003.

Effectiveness of the Pennsylvania R&D Tax Credit Program

The time frame for R&D projects in the private sector can be lengthy. It is not uncommon for businesses to have R&D projects extend for 10 to 15 years or more. The Pennsylvania R&D tax credit has thus far had a potential impact on increasing research expenses in fifteen years, 1997 through 2011. Although 1996 Pennsylvania research expenses were used to calculate the credit in 1997, the taxpayer's R&D decisions could not have been affected by the credit prior to enactment of Act 7 in May 1997. Also, the changes made by Act 46 of 2003 altered several parameters of the program that could impact the effectiveness of the R&D tax credit. However, some observations can be made about the effectiveness of the Pennsylvania R&D tax credit in its relatively short existence.

As was noted above, the most recent economic recession did have an impact on R&D spending in Pennsylvania by private industry. Overall, R&D spending in Pennsylvania by industry fell by 6.3 percent in 2008 but recovered modestly in 2009 to grow by 2.6 percent according to NSF data.

Over the lifetime of the R&D tax credit program, 1,904 different taxpayers have been awarded some amount of the total \$433 million in tax credit awarded between 1997 and 2012. The number of taxpayers qualifying for the tax credit due to increased Pennsylvania research expenditures is still expanding, though there is some volatility from year to year regarding Pennsylvania research expenditure amounts.

Of the 569 taxpayers receiving the R&D tax credit in 2012, 217 were either Pennsylvania S corporations, LLCs, LLPs (limited liability partnerships) or individuals and 352 were C corporations. The S corporations,

¹¹ "The Research Tax Credit's Design and Administration Can Be Improved", Prepared by the Government Accountability Office (GAO), GAO-10-136, November 2009.

¹² CCH Incorporated, Multistate Charts, ¶680-200 Credits for Investment/Research Activities.

¹³ Companies with 225 employees or less may sell unused R&D tax credits in New Jersey.

LLCs, LLPs or individuals received \$9.4 million in R&D tax credit, while the C corporations received \$45.6 million.

The 569 taxpayers claiming the R&D tax credit in 2012 had total Pennsylvania research expenditures in taxable year 2011 of \$4,129.3 million. This was a 6.6 percent increase compared to their total Pennsylvania research expenditures in taxable year 2010 of \$3,872.3 million.

Impact on Not Small Businesses

Out of the 569 taxpayers receiving the tax credit in 2012, 327 did not qualify as “small” businesses. Their total Pennsylvania research expenditures in taxable year 2011 were \$4,019.5 million, a 6.2 percent increase over their taxable year 2010 Pennsylvania research expenditures of \$3,786.0 million. They received \$47.9 million in R&D tax credit in December 2012.

Of the 327 “not small” businesses, 262 increased their Pennsylvania research expenditures in taxable year 2011 over taxable year 2010 by 19.9 percent in the aggregate. Their Pennsylvania research expenditures in taxable year 2011 rose to \$2,640.7 million from \$2,203.2 million in taxable year 2010. Only 65 of these businesses reduced their Pennsylvania research expenditures over the same period. Their Pennsylvania research expenditures in taxable year 2011 declined by 12.9 percent to \$1,378.8 million from \$1,582.8 million in taxable year 2010.

Impact on Small Businesses

Out of the 569 taxpayers receiving the tax credit in 2012, 242 were “small” businesses. Their total Pennsylvania research expenditures in taxable year 2011 were \$109.8 million, a 27.3 percent increase over their taxable year 2010 Pennsylvania research expenditures of \$86.3 million.

The 242 “small” businesses received \$7.1 million in R&D tax credit of the \$11.0 million set aside for them in 2012.

Of the 242 “small” businesses, 196 increased their Pennsylvania research expenditures in taxable year 2011 over taxable year 2010 by 46.7 percent in the aggregate. Their Pennsylvania research expenditures in taxable year 2011 rose to \$85.1 million from \$58.0 million in taxable year 2010. Only 46 “small” businesses reduced their Pennsylvania research expenditures over the same period. Their Pennsylvania research expenditures in taxable year 2011 declined by 12.5 percent to \$24.7 million from \$28.2 million in taxable year 2010.

Impact on First Time Claimants and New Companies

In 2012, 150 taxpayers were awarded the tax credit for the first time, claiming \$5.6 million in credit. Their Pennsylvania research expenditures totaled \$239.1 million for taxable year 2011. Conversely, 212 taxpayers that claimed the tax credit in 2011 did not receive any credit in 2012. These 212 taxpayers had Pennsylvania research expenditures in taxable year 2010 of about \$833.7 million and claimed about \$11.5 million in tax credit in 2011.

Of all the taxpayers claiming the R&D tax credit in 2012, 272 were companies incorporated in Pennsylvania after the passage of Act 7 of 1997. It is possible that not all of these newly incorporated companies are start-ups, but may be newly formed subsidiaries of a parent corporation. These companies claimed \$19.5 million in tax credit in 2012 and had total Pennsylvania research expenditures in taxable year 2011 of about \$1,011.8 million, a 22.8 percent increase from their Pennsylvania research expenditures in taxable year 2010 of about \$823.7 million.

The 272 recently incorporated companies had a total taxable year 2010 CSFT liability of \$5.8 million; 123 taxpayers had zero tax liability. The 272 new companies had a total taxable year 2010 CNIT liability of \$25.5 million; 229 taxpayers had zero tax liability.

Impact on Established Companies

In order to provide more insight into the companies that regularly claim the R&D tax credit, this report will examine 119 taxpayers for which the Department has tracked Pennsylvania research expenditures for the last ten taxable years, from 2002 through 2011. This group of credit recipients has received \$166.4 million in total tax credit from 1997 through 2012, or 38.4 percent of the total \$433 million awarded over sixteen years. These 119 companies represent 40.8 percent of the number of companies that received the R&D tax credit in its first year, 1997. As a group, these taxpayers are a representative cross-section of the type of companies that have come to consistently claim the R&D tax credit.

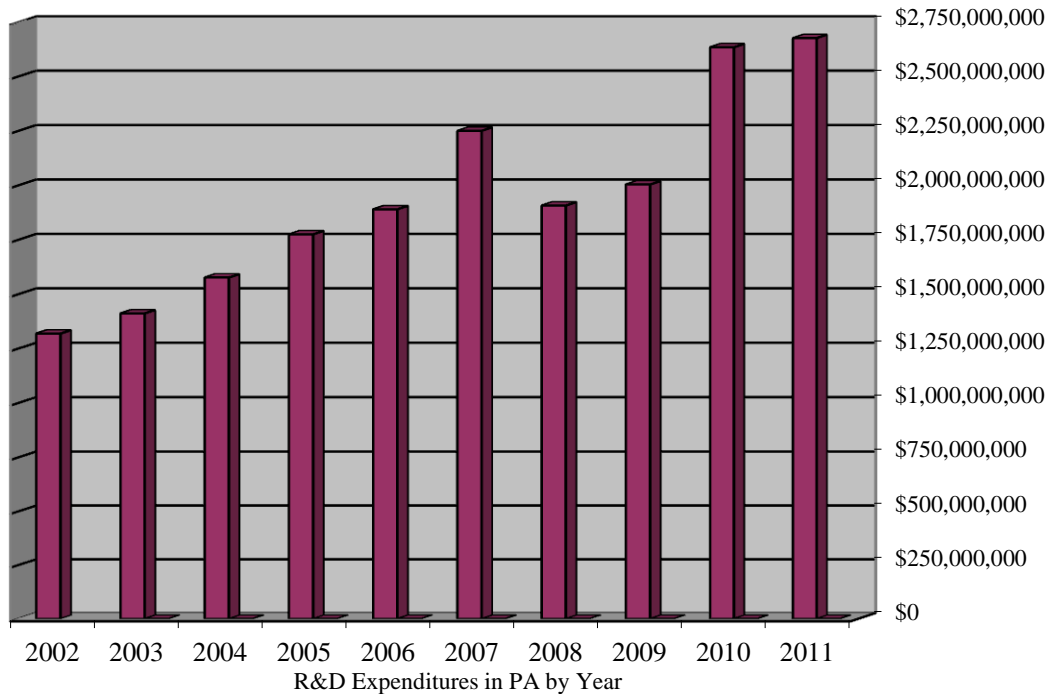
For these 119 taxpayers, their 2011 Pennsylvania R&D expenditures totaled just over \$2,676.4 million. This is an aggregate growth rate of 102.9 percent over their 2002 Pennsylvania R&D expenditures of about \$1,319.1 million; between 2002 and 2011, the Pennsylvania R&D expenditures for these 119 taxpayers grew at a compound annual growth rate of 8.2 percent.

These 119 taxpayers were awarded about \$28.2 million in R&D tax credit in 2012, just over one-half of the total amount of R&D tax credit awarded in December 2012. This credit amount was about 1.1 percent of their total amount of Pennsylvania research expenditures for the taxpayers in taxable year 2011. Overall, it is important to note that the R&D tax credit awarded was relatively small when compared to the amount of money spent by the taxpayers to conduct their research activities in the Commonwealth.

The 119 established taxpayers had a total CSFT liability for taxable year 2010 of \$7.0 million and a total CNIT liability for taxable year 2010 of \$38.3 million.

Chart 1 graphically shows the Pennsylvania R&D expenditures for the 119 established taxpayers for the last ten taxable years, 2002 through 2011.

**Chart 1. Pennsylvania R&D Expenditures by Year for 119 Established Companies
With PA Expenditure Data Between 2002 and 2011**



This chart graphically demonstrates the effect of the most recent economic recession on R&D expenditures in Pennsylvania for the 119 taxpayers included in the data. While the R&D expenditures in Pennsylvania for these 119 taxpayers grew by 19.1 percent in 2007, due in large part to the recession, their

R&D expenditures in Pennsylvania fell by 15.2 percent in 2008. Their 2009 R&D expenditures increased modestly (+5.1 percent) over 2008, but grew much more dramatically in 2010 (+31.5 percent).

Small versus Not “Small”

Of the 119 taxpayers, 86 did not qualify as “small” businesses. They received about \$161.3 million in tax credit over the sixteen years of the program. Their 2011 Pennsylvania R&D expenditures totaled about \$2,652.3 million. This is an aggregate growth rate of 101.5 percent over their 2002 Pennsylvania R&D expenditures of about \$1,316.2 million; between 2002 and 2011, the Pennsylvania R&D expenditures for these 86 taxpayers grew at a compound annual growth rate of 8.1 percent.

Of the 119 taxpayers, there were 33 “small” businesses that received about \$5.1 million in tax credit over the sixteen years of the program. Their 2011 Pennsylvania R&D expenditures totaled about \$24.2 million. This is an aggregate growth rate of 738 percent over their 2002 Pennsylvania R&D expenditures of about \$2.9 million; between 2002 and 2011, the Pennsylvania R&D expenditures for these 33 taxpayers grew at a compound annual growth rate of 26.6 percent.

By Industry Type

Of the 119 taxpayers, 81 were classified as manufacturers. They received about \$148.8 million in tax credit over the sixteen years of the program. Their 2011 Pennsylvania R&D expenditures totaled about \$2,437.7 million. This is an aggregate growth rate of 89 percent over their 2002 Pennsylvania R&D expenditures of \$1,289.5 million; between 2002 and 2011, the Pennsylvania R&D expenditures for these 81 taxpayers grew at a compound annual growth rate of 7.3 percent.

Of the 119 taxpayers, there were 38 non-manufacturing businesses that received about \$17.7 million in tax credit over the sixteen years of the program. Their 2011 Pennsylvania R&D expenditures totaled about \$238.7 million. This is an aggregate growth rate of 707 percent over their 2002 Pennsylvania R&D expenditures of about \$29.6 million; between 2002 and 2011, the Pennsylvania R&D expenditures for these 38 taxpayers grew at a compound annual growth rate of 26.1 percent.

Conclusions on the Impact of the R&D Tax Credit in Pennsylvania

When all 569 taxpayers receiving the R&D tax credit in 2012 were examined, “small” businesses increased their Pennsylvania research expenditures in taxable year 2011 more than “not small” businesses. However, the Pennsylvania research expenditures for “small” businesses were only 2.7 percent of the total Pennsylvania research expenditures in taxable year 2011. The overwhelming majority of Pennsylvania research expenditures continue to be made by taxpayers not classified as “small” businesses.

Of the 119 taxpayers examined for whom the Department has tracked Pennsylvania research expenditures for the last ten taxable years, for 2002 through 2011, manufacturers were the primary beneficiaries. Across all of the business types, the R&D tax credit remains a small percentage of Pennsylvania research expenditures. Hence, many other factors are likely to affect a company’s R&D spending decisions.

Report Conclusion

The R&D tax credit has existed in Pennsylvania for sixteen years. Literature evaluating the effectiveness of the federal R&D tax credit and state R&D tax credits has shown mixed results regarding the effectiveness of the programs. Many factors other than the R&D tax credit influence a company’s R&D investment decisions. This report’s other observations can be summarized as:

- In December 2012, 569 companies were awarded credits, receiving the capped amount of \$55 million, or just over 51 percent of the amount requested.
- In the absence of a cap, almost \$107 million in tax credits would have been awarded. This was the second highest amount of tentative credit ever filed for in a year in the history of the program.

- In tax year 2011, the 569 companies awarded the R&D tax credit in 2012 had total Pennsylvania research expenditures of \$4,129.3 million, a 6.6 percent increase over their tax year 2010 Pennsylvania research expenditures.
- Manufacturing firms, particularly pharmaceutical manufacturers, continue to be the primary beneficiaries of the R&D tax credit.
- “Small” businesses claimed \$7.1 million of the \$11.0 million in R&D tax credit set aside for them in 2012.
- As of February 2013, a total of \$50.6 million in unused R&D tax credit have been sold or assigned from tax credit awarded in December 2003 through December 2011; approximately \$47.5 million was paid for the unused credit, or about 93.8 percent of the value of the unused credits.
- The R&D tax credit program has awarded a total of \$433 million in tax credit to 1,904 different taxpayers over the life of the program thus far. Without the caps on annual awards, a total of \$1,264.4 million in requested R&D tax credit would have been awarded. The effect of the annual cap on awards reduced the amount of R&D tax credits awarded to 34 percent of the requested amount.

APPENDIX A

**Table 1. Pennsylvania Research & Development Tax Credit Program
Taxpayers Receiving Credit in December 2010, 2011 and 2012 in Dollars
Sorted by 2012 Credit Awarded (Largest to Smallest)**

<i>Taxpayer Name</i>	<i>2012 Credit Awarded</i>	<i>2012 Credit Utilized¹</i>	<i>2010 & 2011 Credit Awarded</i>	<i>2010 & 2011 Credit Utilized¹</i>
Merck, Sharp & Dohme Corp.	\$10,263,039	\$0	\$20,912,314	\$10,313,137
Janssen Research & Development, LLC (f/k/a J&J Pharmaceutical Research & Development, LLC)	\$5,461,142	\$0	\$2,195,145	\$655,712
GlaxoSmithKline, LLC (f/k/a SmithKline Beecham Corporation)	\$4,247,696	\$0	\$1,387,216	\$1,387,216
Eli Lilly and Company	\$3,552,766	\$0	\$3,242,774	\$1,634,225
The Boeing Company	\$1,987,913	\$0	\$0	\$0
LSI Corporation	\$1,927,530	\$0	\$2,084,255	\$1,965,762
Lockheed Martin Corporation	\$1,153,320	\$0	\$2,200,751	\$2,200,751
Forest Research Institute, Inc.	\$999,077	\$0	\$481,489	\$0
Teva Branded Pharmaceutical Products R&D, Inc.	\$903,866	\$0	\$566,948	\$566,948
The Vanguard Group, Inc.	\$819,690	\$0	\$344,104	\$344,104
Seneca Resources Corporation	\$786,694	\$0	\$0	\$0
NetApp, Inc. (f/k/a Network Appliance, Inc.)	\$706,536	\$0	\$0	\$0
CNH America, LLC	\$634,466	\$0	\$193,646	\$193,646
Comcast Corporation	\$590,759	\$0	\$1,109,263	\$81,197
Endo Pharmaceuticals, Inc.	\$454,512	\$0	\$242,789	\$242,789
Heinz Management, LLC	\$387,544	\$0	\$307,095	\$125,057
CSL Behring, LLC	\$342,911	\$0	\$70,263	\$0
GE Betz, Inc.	\$302,784	\$0	\$0	\$0
Immunex Corporation	\$297,513	\$0	\$437,312	\$64,592
Lutron Electronics Co., Inc.	\$279,898	\$0	\$598,232	\$17,264
United States Steel Corporation	\$267,914	\$0	\$159,533	\$42,695
Hydro-Pac, Inc.	\$259,396	\$0	\$20,816	\$20,816
General Instrument Corporation	\$252,267	\$0	\$0	\$0
CE Citycom	\$249,128	\$0	\$301,407	\$301,407
PPG Industries, Inc.	\$238,340	\$0	\$0	\$0
Cordis Corporation	\$231,261	\$0	\$218,932	\$218,932
Medecision, Inc.	\$224,510	\$0	\$334,307	\$10,548
Trevena, Inc. (f/k/a Parallax, Inc.)	\$211,270	\$0	\$171,336	\$160,121
Globus Medical, Inc.	\$209,552	\$0	\$239,995	\$239,995
Grove US, LLC	\$208,554	\$0	\$171,439	\$26,026
Victaulic Company	\$200,243	\$0	\$175,224	\$175,224
GSI Commerce Solutions, Inc.	\$193,051	\$0	\$0	\$0
Texas Instruments Incorporated	\$189,241	\$0	\$105,046	\$105,046
Holtec Manufacturing Division, Inc.	\$188,740	\$0	\$45,681	\$43,099
Seegrid Corporation	\$172,555	\$0	\$9,447	\$9,447
Cognition Therapeutics, Inc.	\$169,391	\$0	\$109,266	\$28,937
NextGen Healthcare Information Systems, Inc.	\$163,906	\$0	\$189,715	\$189,715
The Hershey Company	\$163,653	\$0	\$137,825	\$137,825
Sanofi Pasteur, Inc.	\$162,846	\$0	\$355,340	\$355,340
Novo Nordisk, Inc.	\$160,814	\$0	\$140,111	\$140,111
Caterpillar, Inc.	\$156,931	\$0	\$145,221	\$145,221
Gemini Plastics, Inc.	\$154,951	\$0	\$163,597	\$88,768
Bentley Systems Incorporated	\$154,057	\$0	\$51,339	\$0
Polymedix Pharmaceuticals, Inc.	\$148,579	\$0	\$95,047	\$1,090
Auto Soft, Inc.	\$138,882	\$0	\$0	\$0
Minitab, Inc.	\$138,315	\$0	\$142,461	\$55,621

Taxpayer Name	2012 Credit Awarded	2012 Credit Utilized¹	2010 & 2011 Credit Awarded	2010 & 2011 Credit Utilized¹
Graham Packing Holdings Company, LLP	\$137,675	\$0	\$0	\$0
N.A. Water Systems, LLC	\$136,411	\$0	\$138,943	\$138,943
Finisar Corporation	\$135,943	\$0	\$54,714	\$0
II-VI Incorporated	\$135,842	\$0	\$69,647	\$9,480
Johnson Matthey, Inc.	\$135,366	\$0	\$60,725	\$40,834
Joy Technologies, Inc.	\$134,232	\$0	\$0	\$0
FCI USA, LLC	\$133,198	\$0	\$0	\$0
McKesson Automation, Inc.	\$131,349	\$0	\$46,892	\$40,256
Lord Corporation	\$131,241	\$0	\$61,527	\$24,429
Teva Pharmaceuticals USA, Inc.	\$129,362	\$0	\$251,817	\$251,817
The Valspar Corporation	\$128,082	\$0	\$105,730	\$0
RB Distribution, Inc.	\$127,509	\$0	\$0	\$0
Net Health Systems, Inc.	\$125,687	\$0	\$149,169	\$141,820
Accu Measurement Testing, Inc.	\$120,288	\$0	\$126,324	\$126,324
PMC-Sierra US, Inc.	\$120,002	\$0	\$22,153	\$22,153
EKL Machine, Inc.	\$115,776	\$0	\$0	\$0
Tait Towers, Inc.	\$114,348	\$0	\$66,216	\$4,278
Synchronoss Technologies, Inc.	\$112,049	\$0	\$9,497	\$9,497
Puritan Products, Inc.	\$110,770	\$0	\$0	\$0
Union Carbide Corporation	\$109,206	\$0	\$0	\$0
Kennametal, Inc.	\$107,810	\$0	\$130,991	\$0
Universal Stainless and Alloy Products, Inc.	\$106,733	\$0	\$0	\$0
Fidelity Information Services, Inc.	\$106,512	\$0	\$176,978	\$100,034
Taktl, LLC	\$106,302	\$0	\$0	\$0
Ceptaris Therapeutics, Inc.	\$100,582	\$0	\$49,629	\$3,177
Dcroft, Inc.	\$99,927	\$0	\$113,738	\$113,738
Bridge Semiconductor Corporation	\$99,207	\$0	\$237,197	\$237,197
Vitae Pharmaceuticals, Inc. (f/k/a Concurrent Pharmaceuticals, Inc.)	\$98,234	\$0	\$81,973	\$10,540
SAP America, Inc.	\$98,186	\$0	\$318,346	\$318,346
Verizon Data Services, LLC	\$96,797	\$0	\$62,974	\$2,476
Tarsa Therapeutics, Inc.	\$95,376	\$0	\$46,544	\$0
AT&T Mobility Services, LLC	\$95,242	\$0	\$0	\$0
Lazarus Therapeutics, Inc.	\$93,106	\$0	\$38,111	\$0
Clearcount Medical Solutions, Inc.	\$91,774	\$0	\$146,192	\$146,192
Dynavox System, LLC	\$89,760	\$0	\$155,530	\$0
Electro-Science Laboratories, Inc.	\$89,589	\$0	\$66,177	\$66,177
Apangea Learning, Inc.	\$86,668	\$0	\$0	\$0
Penn Manufacturing Industries, Inc.	\$86,173	\$0	\$41,857	\$41,857
Phoenix Contact Development & Manufacturing, Inc.	\$82,991	\$0	\$64,843	\$29,496
Avere Systems, Inc.	\$80,386	\$0	\$65,981	\$46
MEI, Inc.	\$80,133	\$0	\$0	\$0
Wavefront Research, Inc.	\$77,724	\$0	\$0	\$0
BioSpectra, Inc.	\$77,711	\$0	\$0	\$0
Shifa Biomedical Corporation	\$77,285	\$0	\$0	\$0
Imperial Carbide, Inc.	\$74,891	\$0	\$0	\$0
Community Networks, LLC	\$73,190	\$0	\$0	\$0
Avery Dennison Corporation	\$72,642	\$0	\$81,636	\$34,008
Ad Base Group, Inc.	\$72,092	\$0	\$90,881	\$7,233
Ratex Business Solutions, Inc.	\$70,749	\$0	\$51,468	\$7,670
Venture 3 Systems, LLC	\$69,031	\$0	\$0	\$0
KPGW Holding Company, LLC	\$67,367	\$0	\$0	\$0
Progenra, Inc.	\$67,340	\$0	\$0	\$0
Precision Therapeutics, Inc.	\$66,344	\$0	\$111,061	\$4,638
Schott North America, Inc.	\$64,980	\$0	\$170,094	\$4,891

Taxpayer Name	2012 Credit Awarded	2012 Credit Utilized¹	2010 & 2011 Credit Awarded	2010 & 2011 Credit Utilized¹
eDigital Data Center, Inc.	\$64,860	\$0	\$51,591	\$51,591
The Milnes Co., Inc.	\$64,459	\$0	\$0	\$0
AMETEK, Inc.	\$63,891	\$0	\$88,166	\$88,166
Milnes Engineering, Inc.	\$63,730	\$0	\$41,558	\$10,102
Qortek, Inc.	\$62,827	\$0	\$97,408	\$393
Tiger Optics, Inc.	\$62,233	\$0	\$70,731	\$35,218
Gelest, Inc.	\$62,196	\$0	\$65,193	\$65,193
Tech Molded Plastics, Inc.	\$62,004	\$0	\$0	\$0
North American Hoganäs, Inc.	\$61,961	\$0	\$0	\$0
ThingWorx, Inc.	\$61,541	\$0	\$0	\$0
Kenexa Technology, Inc.	\$60,814	\$0	\$0	\$0
Bodymedia, Inc.	\$59,747	\$0	\$26,843	\$17,434
Autodesk, Inc.	\$59,471	\$0	\$12,325	\$12,325
Thermo Fisher Scientific, Inc.	\$59,075	\$0	\$111,198	\$0
VideoRay, LLC	\$58,884	\$0	\$0	\$0
Interstate Management Resources, Inc.	\$58,815	\$0	\$106,433	\$0
EQT Production Company	\$58,709	\$0	\$0	\$0
Maya Design, Inc.	\$57,671	\$0	\$71,879	\$677
Aquatech International Corporation	\$57,588	\$0	\$97,022	\$97,022
Ecotech Marine, LLC	\$56,704	\$0	\$51,800	\$51,800
Touchtown, Inc.	\$56,555	\$0	\$20,443	\$10,192
Manley Holdings, Inc.	\$55,956	\$0	\$20,860	\$20,860
Intel Americas, Inc.	\$55,862	\$0	\$106,359	\$106,359
Caterpillar Global Mining America, LLC (f/k/a Bucyrus America, Inc.)	\$55,735	\$0	\$0	\$0
Innovative Control Systems, Inc.	\$55,462	\$0	\$16,866	\$9,783
Pikimal, LLC	\$54,847	\$0	\$0	\$0
General Dynamics Satcom Technologies, Inc.	\$54,779	\$0	\$34,085	\$34,085
Emphasys Technologies	\$54,222	\$0	\$0	\$0
Control Concepts Corporation	\$53,809	\$0	\$85,199	\$85,199
Industrial Scientific Corporation	\$53,585	\$0	\$102,746	\$37,973
Verizon Business Network Services, Inc.	\$53,082	\$0	\$0	\$0
Wheelhouse Analytics, LLC (f/k/a Coates Solutions, LLC)	\$51,578	\$0	\$0	\$0
Axion Power Battery Mfg, Inc.	\$51,512	\$0	\$283,082	\$0
EMS Charts, Inc.	\$51,477	\$0	\$85,435	\$85,435
Third Eye Diagnostics, Inc.	\$50,420	\$0	\$31,111	\$31,111
Ranbar Electrical Materials, Inc.	\$50,344	\$0	\$0	\$0
SPX Corporation	\$49,786	\$0	\$14,711	\$14,711
Two Technologies, Inc.	\$49,567	\$0	\$0	\$0
Steven B. Golden Associates, Inc. (t/a Artskills)	\$49,327	\$0	\$49,150	\$4,483
Emotion Kayaks, Inc.	\$48,415	\$0	\$60,333	\$33,989
Dataforma Incorporated	\$48,064	\$0	\$23,107	\$23,107
ServiceLink, Inc.	\$47,728	\$0	\$209,949	\$209,949
Numoda Technologies, Inc.	\$47,417	\$0	\$112,149	\$112,149
S&S Processing, Inc.	\$47,403	\$0	\$60,334	\$37,411
TCI Ceramics, Inc.	\$47,148	\$0	\$16,755	\$0
Chant Engineering Co., Inc.	\$46,478	\$0	\$128,352	\$32,950
Cellco Partnership	\$43,416	\$0	\$41,741	\$0
InfoMC, Inc.	\$43,366	\$0	\$87,723	\$4,006
Controlled Molding, Inc.	\$43,013	\$0	\$43,968	\$9,628
Respironics, Inc.	\$43,011	\$0	\$153,995	\$0
Breen Energy Solutions, LLC	\$42,850	\$0	\$259	\$0
Energy Technology Partnership, LLC	\$42,598	\$0	\$0	\$0
Aprecia Pharmaceuticals Company, Inc.	\$42,547	\$0	\$105,217	\$75,577

Taxpayer Name	2012 Credit Awarded	2012 Credit Utilized¹	2010 & 2011 Credit Awarded	2010 & 2011 Credit Utilized¹
Bitronics, LLC	\$42,486	\$0	\$0	\$0
Cernostics, Inc.	\$42,004	\$0	\$0	\$0
Z-Band, Inc.	\$41,722	\$0	\$23,318	\$967
Fairchild Semiconductor Corporation	\$41,643	\$0	\$76,059	\$10,739
Innovative Sintered Metals, Inc.	\$41,471	\$0	\$40,477	\$40,477
AT&T Services, Inc.	\$41,469	\$0	\$19,497	\$9,640
Air Products and Chemicals, Inc.	\$40,938	\$0	\$0	\$0
Caliber Therapeutics, Inc.	\$40,447	\$0	\$23,317	\$1,011
Sicom Systems, Inc.	\$39,623	\$0	\$17,838	\$17,838
Global Seating Systems, LLC	\$39,599	\$0	\$43,945	\$37,310
Channellock, Inc.	\$39,352	\$0	\$39,830	\$2,843
PhaseBio Pharmaceuticals, Inc.	\$39,002	\$0	\$34,254	\$12,236
W.L. Gore & Associates, Inc.	\$38,706	\$0	\$1,236	\$0
Psychology Software Tools, Inc.	\$38,513	\$0	\$38,243	\$22,295
Galleon Pharmaceuticals, Inc.	\$37,919	\$0	\$84,025	\$0
Woodward McCoach, Inc.	\$37,868	\$0	\$577,052	\$527,052
The Dow Chemical Company	\$37,856	\$0	\$0	\$0
FS-Elliott Co., LLC	\$37,675	\$0	\$28,243	\$28,243
Coskata, Inc.	\$37,179	\$0	\$47,883	\$7,597
Omega Design Corporation	\$36,800	\$0	\$0	\$0
Aerotech, Inc.	\$36,654	\$0	\$6,206	\$6,206
NuTec Tooling Systems, Inc.	\$36,605	\$0	\$7,885	\$7,885
First Insight, Inc.	\$35,863	\$0	\$16,349	\$16,349
Nutrisystem, Inc.	\$35,726	\$0	\$29,917	\$29,917
Jordan Acquisition Group, LLC (dba American Auto Matrix)	\$35,406	\$0	\$6,010	\$6,010
Team Ten, LLC (American Eagle Paper Mills)	\$35,346	\$0	\$33,312	\$33,312
Akustica, Inc.	\$35,257	\$0	\$0	\$0
Cook Myosite, Inc.	\$34,819	\$0	\$62,969	\$4,535
Dynalene, Inc.	\$34,805	\$0	\$0	\$0
Crescent Industries, Inc.	\$34,581	\$0	\$0	\$0
LifeSensors, Inc.	\$34,321	\$0	\$0	\$0
Qmac - Quality Machining, Inc.	\$34,288	\$0	\$23,853	\$23,853
Actuated Medical, Inc. (f/k/a Piezo Resonance Innovations, Inc.	\$34,183	\$0	\$74,144	\$74,144
Magnetic Windings Co., Inc.	\$33,825	\$0	\$2,500	\$2,500
Siemens Molecular Imaging, Inc.	\$33,215	\$0	\$0	\$0
BioClinica, Inc.	\$33,145	\$0	\$0	\$0
Certes Networks, Inc. (f/k/a Cipheroptics, Inc.)	\$33,071	\$0	\$34,401	\$34,401
Coldlight Solutions, LLC	\$33,050	\$0	\$47,801	\$47,801
Renal Solutions, Inc.	\$32,950	\$0	\$0	\$0
Itrco, LP	\$32,462	\$0	\$0	\$0
Assistive Technology Products, Inc.	\$32,437	\$0	\$37,964	\$37,964
Nazareth Industrial Corporation	\$31,946	\$0	\$13,631	\$13,631
Dobil Laboratories, Inc.	\$31,925	\$0	\$0	\$0
Future POS, Inc. (f/k/a Cutting Edge Solutions, Inc.)	\$31,530	\$0	\$92,367	\$92,367
Wampole Miller, Inc.	\$30,910	\$0	\$0	\$0
Inmedius, Inc.	\$30,803	\$0	\$132,159	\$63,498
TOXCO, Inc.	\$30,597	\$0	\$15,493	\$15,493
Communications Test Design, Inc.	\$30,596	\$0	\$0	\$0
Printmail Systems, Inc.	\$30,418	\$0	\$0	\$0
Advanced Research Systems, Inc.	\$30,073	\$0	\$25,024	\$12,823
Fairmount Foundry, Inc.	\$30,064	\$0	\$6,824	\$6,824
Honeywell International, Inc.	\$29,979	\$0	\$310,791	\$310,791
Vesuvius USA Corp.	\$29,927	\$0	\$13,862	\$13,862

Taxpayer Name	2012 Credit Awarded	2012 Credit Utilized¹	2010 & 2011 Credit Awarded	2010 & 2011 Credit Utilized¹
Reclamere, Inc.	\$29,804	\$0	\$25,884	\$25,884
Altra Industrial Motion, Inc.	\$29,758	\$0	\$0	\$0
Amuneal Manufacturing Corp.	\$29,723	\$0	\$28,798	\$28,798
R&D Coatings, Inc.	\$29,533	\$0	\$38,074	\$38,074
Cohera Medical, Inc.	\$29,470	\$0	\$37,088	\$37,088
Analytical Graphics, Inc.	\$29,148	\$0	\$41,671	\$1,044
Just Between Friends, Inc.	\$29,014	\$0	\$36,265	\$36,265
Ventana USA, LLP	\$28,896	\$0	\$71,604	\$71,604
PSI Medical Catheter Care, LLC	\$28,682	\$0	\$0	\$0
Allomet Corporation	\$28,657	\$0	\$20,617	\$0
Amphenol Intercom Systems, Inc.	\$28,498	\$0	\$8,344	\$8,344
ShowClix, Inc.	\$28,360	\$0	\$0	\$0
Science Applications International Corp.	\$28,303	\$0	\$2,981	\$2,981
Techniserv, Inc.	\$27,956	\$0	\$0	\$0
Carlisle Construction Materials Incorporated	\$27,729	\$0	\$24,253	\$24,253
Flexible Compensators, Inc. (t/a Flex Com)	\$27,573	\$0	\$35,849	\$21,149
IsoSciences, LLC	\$26,968	\$0	\$60,183	\$60,183
Wacker Chemical Corporation	\$26,410	\$0	\$0	\$0
Eaton Corporation	\$26,078	\$0	\$181,943	\$181,943
Gateway Ticketing Systems, Inc.	\$25,879	\$0	\$86,287	\$33,873
Expert Data Labs, LLC	\$25,756	\$0	\$0	\$0
Talbar, Inc.	\$25,593	\$0	\$1,223	\$0
BioNano Genomics, Inc. (f/k/a BioNanoMatrix, Inc.)	\$25,158	\$0	\$238,968	\$238,968
InvestEdge, Inc.	\$25,064	\$0	\$12,370	\$12,370
Avery Dennison Retail Info Services, LLC	\$24,808	\$0	\$24,253	\$13,431
Sungard Public Sector, Inc.	\$24,453	\$0	\$12,940	\$12,940
Brookville Equipment Corporation	\$24,442	\$0	\$22,111	\$16,612
Draeger Medical Systems, Inc.	\$24,408	\$0	\$17,960	\$17,960
Callidus Biopharma, Inc.	\$24,402	\$0	\$0	\$0
Penn Engineering and Manufacturing Corp.	\$24,357	\$0	\$0	\$0
Castle Mold and Tool, Inc.	\$23,908	\$0	\$53,925	\$24,130
Crystalplex Corporation	\$23,600	\$0	\$21,333	\$21,333
Sciqwest, Inc.	\$23,326	\$0	\$0	\$0
RE2, Inc.	\$23,143	\$0	\$5,416	\$284
Chick Workholding Solutions, Inc.	\$22,434	\$0	\$0	\$0
Lasko Products, Inc.	\$22,305	\$0	\$11,162	\$11,162
Elliott Company	\$22,159	\$0	\$40,587	\$40,587
Mainstream Swimsuits, Inc.	\$22,093	\$0	\$11,333	\$3,919
Chemcut Holdings, LLC	\$22,045	\$0	\$25,693	\$25,693
KW, Inc.	\$21,837	\$0	\$16,232	\$16,232
Fiber-Line, Inc.	\$21,758	\$0	\$7,211	\$7,211
Immunotope, Inc.	\$21,716	\$0	\$99,167	\$99,167
Document Solutions Group, Inc.	\$21,492	\$0	\$61,860	\$46,543
Universal Electric Corporation	\$21,311	\$0	\$0	\$0
Datagrove, Inc.	\$21,300	\$0	\$17,953	\$15,352
AcademyOne, Inc.	\$20,991	\$0	\$64,513	\$64,513
Huston, Inc.	\$20,828	\$0	\$21,927	\$20,766
Mars Incorporated	\$20,821	\$0	\$60,734	\$60,734
Frontline Technologies, Inc.	\$20,480	\$0	\$2,103	\$1,347
Weir Hazleton, Inc.	\$20,356	\$0	\$6,586	\$6,586
Signal Technologies, Inc.	\$20,309	\$0	\$0	\$0
Effort Enterprises, Inc.	\$19,887	\$0	\$7,632	\$6,903
Computer Consultant Team, LLC	\$19,886	\$0	\$4,435	\$4,232
Big B Manufacturing, Inc.	\$19,537	\$0	\$4,751	\$0
Stock, Garber and Associates, Inc.	\$19,537	\$0	\$0	\$0

Taxpayer Name	2012 Credit Awarded	2012 Credit Utilized¹	2010 & 2011 Credit Awarded	2010 & 2011 Credit Utilized¹
Cheetah Technologies, LP	\$19,399	\$0	\$0	\$0
Joseph Barbato Associates, LLC	\$19,325	\$0	\$0	\$0
Centroid Corporation	\$19,189	\$0	\$14,427	\$14,427
Intimate Bridge 2 Conception, Inc.	\$18,978	\$0	\$0	\$0
Graymont (PA), Inc.	\$18,972	\$0	\$0	\$0
ExecutivePulse, Inc.	\$18,935	\$0	\$21,284	\$20,684
Branch Medical Group, Inc.	\$18,850	\$0	\$0	\$0
K&H Technologies, Inc.	\$18,759	\$0	\$0	\$0
Knoll, Inc.	\$18,484	\$0	\$21,475	\$21,475
LPS Mortgage Processing Solutions, Inc.	\$18,400	\$0	\$0	\$0
Tipton Medical & Diagnostic Center	\$18,248	\$0	\$12,824	\$894
Foam Fair Industries, Inc.	\$18,223	\$0	\$0	\$0
Golden Brothers, Inc. (t/a Golden Technologies)	\$18,085	\$0	\$21,776	\$21,776
General Dynamics C4 Systems, Inc.	\$17,854	\$0	\$19,537	\$19,537
Soft Genetics, LLC	\$17,830	\$0	\$29,277	\$29,277
Biocoat, Inc.	\$17,714	\$0	\$1,986	\$1,986
Gichner Systems Group, Inc.	\$17,649	\$0	\$16,550	\$16,550
Fox Chase Chemical Diversity Center	\$17,645	\$0	\$0	\$0
Keystone Food Products, Inc.	\$17,642	\$0	\$0	\$0
Voci Technologies Incorporated	\$17,519	\$0	\$22,836	\$113
Omega Plastics, LLC	\$17,502	\$0	\$0	\$0
Loridian, LLC	\$17,354	\$0	\$19,710	\$19,710
Harry Miller Corporation	\$17,285	\$0	\$5,542	\$735
Follett Corporation	\$17,261	\$0	\$727	\$727
American Turned Products, Inc.	\$17,220	\$0	\$1,978	\$263
PDQ Industries, Inc.	\$16,937	\$0	\$0	\$0
Diamondback Automotive Accessories	\$16,904	\$0	\$11,962	\$11,962
Kroff Chemical Company	\$16,858	\$0	\$31,724	\$30,461
Easthill Specialty, Inc.	\$16,759	\$0	\$0	\$0
Suntex International, Inc.	\$16,512	\$0	\$15,117	\$13,727
Die-Tech, Inc.	\$16,277	\$0	\$8,675	\$6,026
Flexicath, Inc.	\$16,111	\$0	\$0	\$0
S. Vitale Pyrotechnic Industries, Inc.	\$15,976	\$0	\$1,628	\$1,628
Speciality Tires of America, Inc.	\$15,961	\$0	\$11,852	\$0
C-P Converters, Inc.	\$15,801	\$0	\$18,796	\$18,796
Reynolds & Reynolds Electronics, Inc.	\$15,666	\$0	\$25,188	\$13,528
Synergis Technologies, Inc.	\$15,597	\$0	\$0	\$0
Astrobotic Technology, Inc.	\$15,377	\$0	\$12,009	\$12,009
Laminar Flow, Inc.	\$15,362	\$0	\$13,021	\$7,120
Cavanaugh Marketing Network, Inc. (dba Cavanaugh)	\$15,240	\$0	\$13,300	\$0
Vertical Screen, Inc.	\$15,149	\$0	\$0	\$0
Production System Technologies, Inc.	\$15,005	\$0	\$0	\$0
VMware, Inc.	\$14,816	\$0	\$10,683	\$10,683
Valtech Corporation	\$14,801	\$0	\$58,599	\$32,665
Shaw Industries, Inc.	\$14,759	\$0	\$0	\$0
Solar Innovations, Inc.	\$14,679	\$0	\$6,375	\$669
Advanced Controls & Distribution, LLC	\$14,197	\$0	\$0	\$0
New Way Machine Components, Inc. (dba New Way Precision)	\$14,001	\$0	\$0	\$0
Avianna Molecular Technologies, LLC	\$13,951	\$0	\$10,168	\$10,168
Rent Jungle, LLC	\$13,828	\$0	\$0	\$0
Mars Fishcare NA, Inc.	\$13,823	\$0	\$718	\$718
Electronic Claims Processing, Inc.	\$13,634	\$0	\$0	\$0
EMC Corporation	\$13,626	\$0	\$0	\$0
Nitric Biotherapeutics, Inc.	\$13,488	\$0	\$51,261	\$51,261

Taxpayer Name	2012 Credit Awarded	2012 Credit Utilized¹	2010 & 2011 Credit Awarded	2010 & 2011 Credit Utilized¹
Apprise Software, Inc.	\$13,404	\$0	\$0	\$0
Global Technology Enterprise Corp.	\$13,373	\$0	\$0	\$0
Michael & Associates, Inc.	\$13,339	\$0	\$11,339	\$3,072
Tetralogic Pharmaceuticals Corporation	\$13,307	\$0	\$77,266	\$13,456
American Infrastructure, Inc.	\$13,213	\$0	\$0	\$0
Z-Axis Connector Company	\$13,027	\$0	\$0	\$0
GAI-Tronics Corporation	\$13,025	\$0	\$10,752	\$10,752
Lucas Systems, Inc.	\$13,016	\$0	\$17,258	\$17,258
Pelletron Corporation	\$12,778	\$0	\$25,325	\$25,325
GES Automation Technology, Inc.	\$12,720	\$0	\$60,988	\$4,605
Raven Industries, Inc.	\$12,685	\$0	\$0	\$0
Custom Laminating Corporation	\$12,681	\$0	\$0	\$0
NuPathe, Inc.	\$12,593	\$0	\$215,201	\$215,201
Ingmar Medical, Ltd.	\$12,549	\$0	\$22,010	\$22,010
Patriot Sensors and Controls Corporation	\$12,495	\$0	\$4,138	\$4,138
Plextronics, Inc.	\$12,476	\$0	\$151,349	\$151,349
Blair Strip Steel Co.	\$12,452	\$0	\$5,015	\$5,015
Just Born, Inc.	\$12,393	\$0	\$2,895	\$2,895
Grant Street Group, Inc.	\$12,264	\$0	\$15,861	\$15,861
LCR Electronics	\$12,260	\$0	\$18,746	\$620
Interstate Building Materials, Inc.	\$12,038	\$0	\$7,805	\$6,049
Patrick M. Dentinger	\$12,010	\$0	\$27,699	\$22,817
Ismael J. Hidalgo	\$12,009	\$0	\$27,696	\$27,696
Beyer Productions, LLC	\$12,002	\$0	\$131,948	\$131,948
JCR Sales Mfg, LLC	\$11,643	\$0	\$0	\$0
Controls Fusion Group, LP	\$11,603	\$0	\$0	\$0
Sonitu, LLC	\$11,570	\$0	\$0	\$0
NoWait, Inc.	\$11,526	\$0	\$0	\$0
Oberon, Inc.	\$11,450	\$0	\$10,289	\$10,289
Collegiate Furnishings, Inc.	\$11,346	\$0	\$0	\$0
Expansyn Technologies, Inc.	\$11,322	\$0	\$6,655	\$6,655
Titan International, Inc.	\$11,267	\$0	\$45,966	\$16,865
Beaver Steel Services, Inc.	\$11,133	\$0	\$0	\$0
Premier Automation Holdings, Inc.	\$11,005	\$0	\$0	\$0
Inventox, Inc.	\$10,988	\$0	\$0	\$0
Cook Technologies, Inc.	\$10,929	\$0	\$195	\$179
Markel Corporation	\$10,630	\$0	\$8,242	\$1,770
PennTecQ, Inc.	\$10,625	\$0	\$0	\$0
Go Green APU, LLC	\$10,583	\$0	\$0	\$0
Custom Milling & Consulting, Inc.	\$10,417	\$0	\$202	\$202
FLSmith, Inc.	\$10,380	\$0	\$9,868	\$9,868
Jeannette Shade and Novelty Company (dba JSG Oceana)	\$10,290	\$0	\$0	\$0
Olympic Steel, Inc.	\$10,260	\$0	\$2,316	\$2,316
Primus Technologies Corp.	\$10,210	\$0	\$0	\$0
Kovatch Mobile Equipment Corp.	\$10,146	\$0	\$0	\$0
Cellular Tracking Technologies, LLC	\$10,029	\$0	\$1,433	\$1,433
Applied Systems Associates, Inc.	\$10,007	\$0	\$0	\$0
Try Tek Machine Works Incorporated	\$9,953	\$0	\$0	\$0
Brandywine Photonics, LLC	\$9,750	\$0	\$0	\$0
Fab Tech, Inc. (dba Corle Building Systems)	\$9,670	\$0	\$0	\$0
JWF Defense Systems, LLC	\$9,548	\$0	\$7,258	\$7,258
Thompsons Candle Co.	\$9,317	\$0	\$3,612	\$2,113
EQT Gathering, Inc.	\$9,230	\$0	\$0	\$0
BioBuffer Solutions, Inc.	\$9,175	\$0	\$0	\$0

Taxpayer Name	2012 Credit Awarded	2012 Credit Utilized¹	2010 & 2011 Credit Awarded	2010 & 2011 Credit Utilized¹
Ohm-Labs, Inc.	\$9,091	\$0	\$0	\$0
Dean Technology, Inc.	\$8,999	\$0	\$2,119	\$2,119
Synopsys, Inc.	\$8,975	\$0	\$12,814	\$12,814
Compu-Craft Fabricators, Inc.	\$8,834	\$0	\$0	\$0
Wampum Hardware Co.	\$8,792	\$0	\$5,833	\$5,833
Four Rivers Software Systems, Inc.	\$8,703	\$0	\$15,225	\$7,468
CDG Environmental, LLC	\$8,686	\$0	\$6,997	\$6,997
Matson & Associates, Inc.	\$8,630	\$0	\$0	\$0
Highwood USA, LLC	\$8,454	\$0	\$0	\$0
Roaring Spring Blank Book Company	\$8,441	\$0	\$20	\$0
Beaumont Development, LLC	\$8,434	\$0	\$4,296	\$4,296
Progeny Systems Corporation	\$8,370	\$0	\$0	\$0
East Coast Erosion Blankets, LLC (dba East Coast Erosion Control)	\$8,245	\$0	\$321	\$321
Pasco Tool & Plastics, Inc.	\$8,151	\$0	\$0	\$0
Berwind Corporation	\$8,134	\$0	\$0	\$0
Glen Carbide, Inc.	\$7,973	\$0	\$0	\$0
Pennoni Associates, Inc.	\$7,965	\$0	\$23,194	\$23,194
American Reading Company, Inc.	\$7,723	\$0	\$10,213	\$2,770
VascularStrategies, LLC	\$7,690	\$0	\$12,544	\$12,544
Problem Solutions, LLC	\$7,393	\$0	\$0	\$0
Double H Plastics, Inc.	\$7,255	\$0	\$0	\$0
EAM-Mosca Corp.	\$7,227	\$0	\$5,094	\$5,094
Dopaco, Inc.	\$7,183	\$0	\$0	\$0
Church & Dwight Co., Inc.	\$7,179	\$0	\$0	\$0
Sentient Investment Corporation	\$7,034	\$0	\$0	\$0
Bra-Vor Tool & Die Company, Inc.	\$6,997	\$0	\$0	\$0
Forms and Surfaces, Inc.	\$6,935	\$0	\$3,808	\$3,808
Superior Tire & Rubber Corp.	\$6,925	\$0	\$3,731	\$801
Sungard Higher Education, Inc.	\$6,822	\$0	\$11,964	\$11,964
Deasey Machine Tool & Die Works, Inc.	\$6,800	\$0	\$7,159	\$2,643
L.F. Lambert Spawn Company, Inc.	\$6,781	\$0	\$181	\$181
Bostik, Inc.	\$6,778	\$0	\$8,410	\$1,467
SKC, Inc.	\$6,758	\$0	\$0	\$0
TB Woods Incorporated	\$6,752	\$0	\$0	\$0
Proxicast, LLC	\$6,723	\$0	\$12,059	\$7,540
Interbots, LLC	\$6,650	\$0	\$10,008	\$10,008
Redpath Integrated Pathology, Inc.	\$6,641	\$0	\$0	\$0
Seneb Biosciences, Inc.	\$6,626	\$0	\$0	\$0
Bellefield Systems, LLC	\$6,584	\$0	\$0	\$0
Cloud Computing Technologies, LLC	\$6,553	\$0	\$0	\$0
Stoner, Inc.	\$6,516	\$0	\$0	\$0
Lamtec Corporation	\$6,454	\$0	\$0	\$0
Diversified Machine, Inc.	\$6,438	\$0	\$10,890	\$1,446
Crestwood Membranes, Inc.	\$6,432	\$0	\$4,389	\$4,389
NE Foods, Inc.	\$6,424	\$0	\$6,039	\$6,039
Keystone Machinery Corporation	\$6,419	\$0	\$0	\$0
Lebanon Tool Company, Inc.	\$6,405	\$0	\$5,458	\$1,537
M-Mech Defense, Inc.	\$6,332	\$0	\$5,763	\$0
Strobic Air Corporation (c/o Met-Pro Corporation)	\$6,300	\$0	\$2,092	\$376
Griffith, Inc. (t/a Alpha Systems)	\$6,284	\$0	\$14,503	\$14,503
Matric Limited	\$6,229	\$0	\$0	\$0
Acopian Technical Company	\$6,160	\$0	\$0	\$0
Premier Automation, LLC	\$6,140	\$0	\$0	\$0
Harsco Corporation	\$6,114	\$0	\$0	\$0

Taxpayer Name	2012 Credit Awarded	2012 Credit Utilized¹	2010 & 2011 Credit Awarded	2010 & 2011 Credit Utilized¹
Tyrone Milling,	\$6,062	\$0	\$7,143	\$2,075
Pittsburgh Plastics Mfg, Inc.	\$6,059	\$0	\$8,216	\$7,261
C.U.E., Inc.	\$6,019	\$0	\$307	\$307
Creative Engineers, Inc.	\$5,915	\$0	\$3,955	\$2,593
Clair Bros. Audio Systems, Inc.	\$5,906	\$0	\$0	\$0
SFS Intec Incorporated	\$5,865	\$0	\$6,854	\$676
Viking Tool & Gage, Inc.	\$5,856	\$0	\$0	\$0
Verizon Services Organization, Inc.	\$5,851	\$0	\$0	\$0
Packworld USA, Ltd.	\$5,836	\$0	\$1,865	\$0
Gautier Steel, Ltd.	\$5,793	\$0	\$0	\$0
Duke Brewing Company, Inc.	\$5,773	\$0	\$5,631	\$2,207
Community Light and Sound, Inc.	\$5,754	\$0	\$14,676	\$14,676
FHM Holding Companies, Inc.	\$5,697	\$0	\$58,219	\$58,219
Whitewater International, LLC	\$5,683	\$0	\$0	\$0
Schmidt Technology Corporation	\$5,577	\$0	\$0	\$0
Sentric, Inc.	\$5,510	\$0	\$0	\$0
Advanced Textile Composites, Inc.	\$5,499	\$0	\$0	\$0
Honeywell Electronic Materials, Inc.	\$5,487	\$0	\$0	\$0
Indigo Biosciences, Inc.	\$5,481	\$0	\$0	\$0
New Standard Corporation	\$5,297	\$0	\$4,390	\$639
Basic Carbide Corporation	\$5,289	\$0	\$5,309	\$5,309
Neutronics, Inc.	\$5,263	\$0	\$1,979	\$1,979
Crystal, Inc. - PMC	\$5,253	\$0	\$4,820	\$0
E.A. Fischione Instruments, Inc.	\$5,137	\$0	\$20,584	\$14,548
Reaxis, Inc.	\$5,134	\$0	\$0	\$0
Sunny Dell Foods, Inc.	\$5,007	\$0	\$0	\$0
Crown Cork & Seal USA, Inc.	\$4,999	\$0	\$22,148	\$0
Alung Technologies, Inc.	\$4,885	\$0	\$296,801	\$296,801
Lone Oak Medical Technologies, LLC	\$4,875	\$0	\$34,905	\$16,838
Novocell Semiconductor, Inc.	\$4,789	\$0	\$5,930	\$0
Edgemate, Inc.	\$4,789	\$0	\$7,153	\$7,153
GapVax, Inc.	\$4,782	\$0	\$2,919	\$2,919
O'Neal Steel, Inc.	\$4,700	\$0	\$0	\$0
Maguire Products, Inc.	\$4,495	\$0	\$0	\$0
Richter Precision, Inc.	\$4,464	\$0	\$4,390	\$4,390
Bulk Chemicals, Inc.	\$4,450	\$0	\$0	\$0
Ernst Conservation Seeds, Inc.	\$4,449	\$0	\$6,066	\$1,894
Delmont Laboratories, Inc.	\$4,411	\$0	\$0	\$0
Chelsea Building Products, Inc.	\$4,341	\$0	\$0	\$0
Godshalls Quality Meats, Inc.	\$4,246	\$0	\$3,058	\$1,833
Fogmaker North America, LLC	\$4,179	\$0	\$0	\$0
Hermance & Strouse, Inc.	\$4,152	\$0	\$0	\$0
Delserro Engineering Solutions, Inc.	\$4,139	\$0	\$0	\$0
The Beistle Company	\$4,126	\$0	\$1,237	\$1,237
Quintech Electronics & Communications, Inc.	\$4,115	\$0	\$17,343	\$14,609
Bio Rad Laboratories, Inc.	\$4,006	\$0	\$0	\$0
Z-Band Video, Inc.	\$3,995	\$0	\$9,887	\$9,887
Robert Bosch, LLC (f/k/a Robert Bosch Corporation)	\$3,995	\$0	\$1,518	\$1,518
American Textile Company, Inc.	\$3,955	\$0	\$0	\$0
Cardinal Systems, Inc.	\$3,938	\$0	\$9,466	\$3,826
Red Valve Company, Inc.	\$3,934	\$0	\$26,023	\$10,790
Oberg Industries, Inc.	\$3,918	\$0	\$0	\$0
Motors Drives & Controls, Inc.	\$3,916	\$0	\$2,841	\$1,817
Abbott Furnace Company, Inc.	\$3,892	\$0	\$0	\$0
Iberium Communications, Inc.	\$3,828	\$0	\$0	\$0

Taxpayer Name	2012 Credit Awarded	2012 Credit Utilized¹	2010 & 2011 Credit Awarded	2010 & 2011 Credit Utilized¹
Kenco Corporation	\$3,809	\$0	\$973	\$819
White Oak Mills, Inc.	\$3,747	\$0	\$0	\$0
Quantum Potential Corporation	\$3,695	\$0	\$0	\$0
United Metal Fabricators, Inc.	\$3,679	\$0	\$0	\$0
Finish Thompson, Inc.	\$3,630	\$0	\$4,180	\$4,180
SofterWare, Inc.	\$3,533	\$0	\$11,480	\$4,040
InspiraFS, Inc.	\$3,318	\$0	\$6,645	\$0
Walsh Construction Company	\$3,315	\$0	\$22,217	\$22,217
Rhiza Labs, LLC	\$3,301	\$0	\$0	\$0
SparkNET Technologies, LLC	\$3,292	\$0	\$0	\$0
STMicroelectronics, Inc.	\$3,260	\$0	\$0	\$0
D&E Machining, Ltd. (f/k/a DEM Advisors, Ltd.)	\$3,255	\$0	\$0	\$0
McAdoo & Allen, Inc.	\$3,238	\$0	\$0	\$0
XF Enterprises, Inc.	\$3,176	\$0	\$1,985	\$462
O.F. Zurn Company	\$3,056	\$0	\$0	\$0
Leech Industries, Inc.	\$3,027	\$0	\$0	\$0
Magnatech International, Inc.	\$2,970	\$0	\$0	\$0
PB Heat, LLC	\$2,942	\$0	\$0	\$0
Sweet Ovations, LLC	\$2,862	\$0	\$2,636	\$2,636
J Baur Machining, Inc.	\$2,809	\$0	\$5,084	\$5,084
Lunchtime Software, LLC	\$2,763	\$0	\$13,292	\$13,081
PRL, Inc.	\$2,755	\$0	\$3,487	\$1,290
Universal Refractories, Inc.	\$2,721	\$0	\$1,253	\$794
Precision Medical Products, Inc.	\$2,637	\$0	\$1,285	\$1,285
QBC Diagnostics, Inc.	\$2,637	\$0	\$0	\$0
Equipois, Inc.	\$2,632	\$0	\$76,516	\$491
Standing Stone Consulting, Inc.	\$2,618	\$0	\$0	\$0
Eastern Manufacturing, Inc.	\$2,610	\$0	\$10,782	\$7,619
Schust Development, Inc.	\$2,608	\$0	\$521	\$521
TLC North, Inc.	\$2,603	\$0	\$0	\$0
SpectrumCo, LLC	\$2,577	\$0	\$0	\$0
Vista Auctions, LLC	\$2,504	\$0	\$0	\$0
CIW Enterprises, Inc.	\$2,473	\$0	\$0	\$0
Dynamic Materials Corporation	\$2,461	\$0	\$0	\$0
PBM, Inc.	\$2,391	\$0	\$5,586	\$5,586
SPD Electrical Systems, Inc.	\$2,379	\$0	\$0	\$0
invivodata, Inc.	\$2,370	\$0	\$1,908	\$0
Advanced Cooling Technologies, Inc.	\$2,343	\$0	\$6,447	\$6,447
Johnstown Machining and Fabrication, Inc.	\$2,327	\$0	\$3,016	\$2
PoolPak Technologies Corporation	\$2,253	\$0	\$0	\$0
Supreme Mid-Atlantic Corp.	\$2,042	\$0	\$0	\$0
HindlePower, Inc.	\$1,997	\$0	\$753	\$753
Polymer Products Company, Inc.	\$1,981	\$0	\$1,279	\$1,279
Dart Container Corporation of PA	\$1,953	\$0	\$979	\$979
Sylvin Technologies, Inc.	\$1,943	\$0	\$440	\$112
Magnesita Refractories Company	\$1,911	\$0	\$4,168	\$4,168
Adaptive Resources, Inc.	\$1,887	\$0	\$0	\$0
R.M. Palmer Company	\$1,874	\$0	\$8,889	\$8,889
Dontech, Inc.	\$1,847	\$0	\$3,158	\$3,158
General Machine Products Co., Inc.	\$1,773	\$0	\$2,667	\$2,667
R-V Industries, Inc.	\$1,738	\$0	\$2,127	\$2,127
Specialty Minerals, Inc.	\$1,710	\$0	\$0	\$0
Appcove, Inc.	\$1,683	\$0	\$7,141	\$7,141
Orasure Technologies, Inc.	\$1,683	\$0	\$56,439	\$2,949
David Michael & Co., Inc.	\$1,620	\$0	\$4,635	\$4,635

<i>Taxpayer Name</i>	<i>2012 Credit Awarded</i>	<i>2012 Credit Utilized¹</i>	<i>2010 & 2011 Credit Awarded</i>	<i>2010 & 2011 Credit Utilized¹</i>
Thomas Erie, Inc.	\$1,617	\$0	\$2,162	\$2,162
RJM Manufacturing, Inc.	\$1,601	\$0	\$517	\$4
Industrial Learning Systems	\$1,522	\$0	\$40,903	\$40,903
Crayola, LLC	\$1,509	\$0	\$0	\$0
BSC Technologies, Inc.	\$1,280	\$0	\$1,324	\$1,324
Solo Laboratories, Inc.	\$1,224	\$0	\$0	\$0
PRL Industries, Inc.	\$1,213	\$0	\$584	\$179
SAS Institute, Inc.	\$1,166	\$0	\$6,702	\$6,702
Minnotte Manufacturing Corporation	\$1,131	\$0	\$8,550	\$5,869
B&G Manufacturing Co., Inc.	\$1,126	\$0	\$0	\$0
Jarex Enterprises, LLC	\$961	\$0	\$10,351	\$10,351
Melior Pharmaceuticals I, Inc.	\$949	\$0	\$4,135	\$4,135
Koryak Consulting, Inc.	\$908	\$0	\$0	\$0
Misco Products Corporation	\$905	\$0	\$610	\$610
Sensible Machines, Inc.	\$873	\$0	\$0	\$0
Edge Robotics, Inc.	\$855	\$0	\$0	\$0
Neville Chemical Company	\$793	\$0	\$2,828	\$954
C.F. Martin & Co., Inc.	\$788	\$0	\$1,693	\$1,693
Rapid Reaction, Inc.	\$775	\$0	\$0	\$0
Bryton Distribution Group, Inc.	\$719	\$0	\$802	\$0
Carpenter Powder Products, Inc.	\$610	\$0	\$0	\$0
ImageCube, LLC	\$598	\$0	\$98	\$98
Alertek, LLC	\$473	\$0	\$725	\$725
Greene, Tweed & Co., Inc.	\$470	\$0	\$89,959	\$47,856
McKamish, Inc.	\$414	\$0	\$0	\$0
Plus Consulting, LLC	\$397	\$0	\$0	\$0
Pitney Bowes Software, Inc.	\$385	\$0	\$11,816	\$11,816
Silberline Manufacturing Co., Inc.	\$350	\$0	\$36,194	\$17,966
Quantum Software Solutions, Inc.	\$337	\$0	\$5,183	\$5,183
Atlas Minerals & Chemicals, Inc.	\$310	\$0	\$998	\$998
Trimetric Enterprises, Inc.	\$292	\$0	\$2,431	\$2,431
Instrumentation Industries, Inc.	\$204	\$0	\$16,468	\$16,468
Antakamatics, Inc.	\$170	\$0	\$496	\$496
Regal Cast, Inc.	\$155	\$0	\$1,306	\$455
Lozier Corporation	\$123	\$0	\$217	\$217
Tait Farm Foods, Inc.	\$47	\$0	\$0	\$0
ABB, Inc.	\$0	\$0	\$19,921	\$19,921
ABEC, Inc.	\$0	\$0	\$14,507	\$4,127
Accipiter Systems, Inc.	\$0	\$0	\$109,021	\$109,021
Acutec Precision Machining, Inc.	\$0	\$0	\$7,239	\$0
Acutronic USA, Inc.	\$0	\$0	\$26,059	\$4,692
Adhesives Research, Inc.	\$0	\$0	\$1,741	\$1,741
Advanced Carbon Technologies, Inc.	\$0	\$0	\$68,992	\$37,856
Advanced Manufacturing Technologies	\$0	\$0	\$3,010	\$3,010
Advanced Mobile Solutions Worldwide, Inc.	\$0	\$0	\$9,621	\$0
Advanced Technology Solutions, Inc. (dba GeographIt)	\$0	\$0	\$7,841	\$7,841
Agentase, LLC	\$0	\$0	\$448,251	\$445,852
American Enterprises MPT Corp.	\$0	\$0	\$23,846	\$23,846
American Hydro Corporation	\$0	\$0	\$1,197	\$1,197
American Precision Powder Coating, LLC	\$0	\$0	\$1,682	\$1,682
AMETEK Pittman, Inc.	\$0	\$0	\$2,728	\$0
Amgen USA, Inc.	\$0	\$0	\$5,401	\$5,401
Angstrom Sciences, Inc.	\$0	\$0	\$4,670	\$2,822
ANSYS, Inc.	\$0	\$0	\$5,531	\$5,531
Applied Geology and Environmental Science, Inc.	\$0	\$0	\$19,926	\$2,901

Taxpayer Name	2012 Credit Awarded	2012 Credit Utilized¹	2010 & 2011 Credit Awarded	2010 & 2011 Credit Utilized¹
Aptagen, LLC	\$0	\$0	\$9,734	\$9,734
Artsana USA, Inc.	\$0	\$0	\$3,351	\$3,351
Ashland, Inc.	\$0	\$0	\$14,531	\$8,821
ASI Technologies, Inc.	\$0	\$0	\$15,411	\$202
Ateeco, Inc.	\$0	\$0	\$1,769	\$1,769
Avid Radiopharmaceuticals, Inc.	\$0	\$0	\$207,458	\$77,163
BAE Systems Land & Armaments, LP (f/k/a United Defense, LP)	\$0	\$0	\$211,028	\$211,028
Beumaris Networks, Inc. (BMI Video c/o Cisco Systems, Inc.)	\$0	\$0	\$13,333	\$868
Bel Connector, Inc. (t/a Stewart Connector, c/o Bel Fuse, Inc.)	\$0	\$0	\$2,155	\$2,155
Benefit Coordinators Corp.	\$0	\$0	\$4,336	\$2,077
Bergmann Associates, Inc.	\$0	\$0	\$5,723	\$5,723
Betts Industries, Inc.	\$0	\$0	\$8,413	\$8,413
Bioconnect Systems, Inc.	\$0	\$0	\$14,660	\$14,660
Blade Diagnostics Corporation	\$0	\$0	\$13,402	\$13,402
Blair Companies	\$0	\$0	\$1,797	\$1,797
Blue Belt Technologies, Inc.	\$0	\$0	\$109,856	\$109,856
Boehringer Ingelheim Pharmaceuticals, Inc.	\$0	\$0	\$240,736	\$223,680
Boehringer Laboratories, Inc.	\$0	\$0	\$6,436	\$6,436
Boose Aluminum Foundry Co., Inc.	\$0	\$0	\$181	\$0
Boose at Cornwall, Inc.	\$0	\$0	\$914	\$0
Bosch Rexroth Corporation	\$0	\$0	\$548	\$548
Brainbond, LLC	\$0	\$0	\$1,794	\$1,794
Bullseye Securities, Inc. (f/k/a BitArmor Systems, Inc.)	\$0	\$0	\$67,246	\$1,171
C&J Industries, Inc.	\$0	\$0	\$6,779	\$6,779
C&T Machining, Inc.	\$0	\$0	\$10,919	\$8,800
Campus Door Holdings, Inc.	\$0	\$0	\$109,680	\$2,340
Can Corporation of America, Inc.	\$0	\$0	\$16,211	\$16,211
Cardiokine Biopharma, LLC	\$0	\$0	\$25,511	\$25,511
Carnegie Learning, Inc.	\$0	\$0	\$2,821	\$0
Carpenter Technology Corporation	\$0	\$0	\$111,126	\$111,126
Cephalon, Inc.	\$0	\$0	\$740,231	\$740,231
Ception Therapeutics, Inc.	\$0	\$0	\$178,206	\$0
Chariot Solutions, LLC	\$0	\$0	\$4,984	\$4,984
ChemImage Corporation	\$0	\$0	\$143,735	\$143,735
Chester Engineers, Inc.	\$0	\$0	\$20,469	\$20,469
Circadiance, LLC	\$0	\$0	\$1,622	\$0
Cisco Systems, Inc.	\$0	\$0	\$48,116	\$46,638
Clark Filer, Inc.	\$0	\$0	\$969	\$0
Classic Industries, Inc.	\$0	\$0	\$103,691	\$41,361
Co-eXprise, Inc.	\$0	\$0	\$1,493	\$1,493
Colorcon, Inc. and Division	\$0	\$0	\$102,658	\$102,658
Combined Systems, Inc.	\$0	\$0	\$3,238	\$3,238
Comfort Care & Resources, Inc.	\$0	\$0	\$348	\$348
Communication Automation Corp.	\$0	\$0	\$74,930	\$74,930
Comprehensive Safety Compliance, Inc.	\$0	\$0	\$588	\$588
Compunetix, Inc.	\$0	\$0	\$51,624	\$51,624
Computer Sciences Corporation	\$0	\$0	\$2,364	\$2,364
ConAgra Foods Enterprise Services, Inc.	\$0	\$0	\$2,516	\$2,516
Consolidated Comm Enterprise Services	\$0	\$0	\$5,373	\$5,373
Contec Systems Industrial Corp.	\$0	\$0	\$444	\$444
Control Chief Corporation	\$0	\$0	\$318	\$0
Converteam Naval Systems, Inc.	\$0	\$0	\$40,115	\$7,963

Taxpayer Name	2012 Credit Awarded	2012 Credit Utilized¹	2010 & 2011 Credit Awarded	2010 & 2011 Credit Utilized¹
Converteam, Inc.	\$0	\$0	\$84,491	\$84,491
Cook Vascular Corporation	\$0	\$0	\$13,133	\$13,133
Corry Rubber Corporation	\$0	\$0	\$32,453	\$22,347
Croda, Inc.	\$0	\$0	\$3,532	\$3,532
CTR Holdings, Inc.	\$0	\$0	\$9,269	\$9,269
CWE, Inc.	\$0	\$0	\$17,884	\$3,412
Cybergenetics Corp.	\$0	\$0	\$3,729	\$2,605
Cyoptics, Inc.	\$0	\$0	\$35,535	\$3,784
Data View, Inc.	\$0	\$0	\$1,000	\$0
Dauphin Precision Tool, LLC	\$0	\$0	\$370	\$0
Dental Designs, Inc.	\$0	\$0	\$3,310	\$3,310
DFT, Inc.	\$0	\$0	\$347	\$347
Diasome Pharmaceuticals, Inc.	\$0	\$0	\$5,777	\$123
Dragonfly Pictures, Inc.	\$0	\$0	\$83,759	\$0
Drug Plastics & Glass Co., Inc.	\$0	\$0	\$2,939	\$2,939
Dyco, Inc.	\$0	\$0	\$6,148	\$4,372
Eagle Brass Company	\$0	\$0	\$3,910	\$3,910
Edcomm, Inc. Bankers Academy (f/k/a Edcomm, Inc.)	\$0	\$0	\$134,214	\$0
Edlon, Inc.	\$0	\$0	\$3,784	\$0
EF Precision, Inc.	\$0	\$0	\$6,439	\$6,439
Effort Foundry, Inc.	\$0	\$0	\$8,859	\$364
Elan Drug Delivery, Inc.	\$0	\$0	\$2,533	\$2,533
Electric Owl Studios, Ltd.	\$0	\$0	\$2,345	\$2,345
Elite Sportswear, LLP	\$0	\$0	\$1,154	\$1,154
Ellwood Investment Corp.	\$0	\$0	\$17,397	\$17,397
Elsner Engineering Works, Inc.	\$0	\$0	\$5,184	\$25
Emerson Process Management Power & Water Solutions, Inc.	\$0	\$0	\$14,273	\$0
Enantigen Therapeutics, Inc.	\$0	\$0	\$8,475	\$8,475
Entech Engineering, Inc.	\$0	\$0	\$10,179	\$10,179
Enzo Life Sciences International, Inc.	\$0	\$0	\$4,340	\$0
Erdman Anthony Associates, Inc.	\$0	\$0	\$3,899	\$3,899
Erie Custom Computer Applications	\$0	\$0	\$3,754	\$3,754
Eriez Manufacturing, Co.	\$0	\$0	\$13,645	\$12,712
ETA Industries, Inc.	\$0	\$0	\$2,353	\$707
Etcetera Edutainment, Inc.	\$0	\$0	\$81,022	\$81,022
EthosGen, LLC	\$0	\$0	\$59,258	\$59,258
Evaheart Medical USA, Inc.	\$0	\$0	\$24,247	\$10,234
Express Dynamics, LLC	\$0	\$0	\$11,238	\$11,238
Extol International, Inc.	\$0	\$0	\$8,235	\$12
Eyenvate, Inc. (f/k/a Eyenvision, Inc.)	\$0	\$0	\$24,837	\$436
F&P Holding Co., Inc.	\$0	\$0	\$68,985	\$14,243
Fabri-Kal Corporation	\$0	\$0	\$27,375	\$5,034
Fairmount Automation, Inc.	\$0	\$0	\$1,631	\$0
FedEx Corporate Services, Inc.	\$0	\$0	\$20,417	\$0
FedEx Ground Package System, Inc.	\$0	\$0	\$14,774	\$14,774
Fidelity Flight Simulation	\$0	\$0	\$32,111	\$32,111
Flexuspine, Inc.	\$0	\$0	\$15,245	\$15,245
Fraser Volpe, LLC	\$0	\$0	\$15,182	\$15,182
Frontier North, Inc.	\$0	\$0	\$5,497	\$0
Fry Communications, Inc.	\$0	\$0	\$2,997	\$2,997
Gamry Instruments, Inc.	\$0	\$0	\$61,947	\$61,947
Garnet BioTherapeutics, Inc.	\$0	\$0	\$130,415	\$945
Gaspari Farm Products, Inc.	\$0	\$0	\$399	\$399
Gemin X Pharmaceuticals US, Inc.	\$0	\$0	\$68,564	\$32,018

Taxpayer Name	2012 Credit Awarded	2012 Credit Utilized¹	2010 & 2011 Credit Awarded	2010 & 2011 Credit Utilized¹
Genco 1, Inc.	\$0	\$0	\$18,813	\$6,321
General Electric Company	\$0	\$0	\$363,475	\$340,544
Gentex Corporation	\$0	\$0	\$64,219	\$22,628
Gentis, Inc.	\$0	\$0	\$19,524	\$19,524
Georgeko Industries, Inc.	\$0	\$0	\$2,282	\$2,282
Google, Inc.	\$0	\$0	\$502,808	\$502,808
Graybill Machines, Inc.	\$0	\$0	\$55,811	\$3,523
Griffith Brothers Whitetail Ridge, Inc.	\$0	\$0	\$15,184	\$15,184
Gyrotan Technology, Inc.	\$0	\$0	\$5,293	\$0
Hamill Manufacturing Company	\$0	\$0	\$2,754	\$2,754
Hamilton Precision Metals, Inc.	\$0	\$0	\$2,875	\$5
Harley Davidson Motor Company Operations	\$0	\$0	\$34,383	\$34,383
Hauck Manufacturing Company, Inc.	\$0	\$0	\$581	\$581
HCKKPM, LLC	\$0	\$0	\$84	\$0
Healthcare Lighting, Inc.	\$0	\$0	\$6,475	\$6,475
Henry Molded Products, Inc.	\$0	\$0	\$3,801	\$2,814
Henson Company, Inc.	\$0	\$0	\$8,009	\$430
Heraeus Materials Technology, LLC	\$0	\$0	\$24,853	\$556
Herbert, Rowland & Grubic, Inc.	\$0	\$0	\$25,265	\$0
Holtec International Power Division, Inc.	\$0	\$0	\$355,030	\$355,030
HomeNet, Inc.	\$0	\$0	\$20,404	\$20,404
Huntingdon County Customs, LLC	\$0	\$0	\$2,363	\$2,363
Hydac Technology Corp.	\$0	\$0	\$8,167	\$8,167
Illuminex Corporation	\$0	\$0	\$33,986	\$33,986
IMC Biotechnology, Inc.	\$0	\$0	\$2,569	\$2,569
Impact Applications, Inc.	\$0	\$0	\$7,413	\$7,413
Industrial Vision Systems, Inc.	\$0	\$0	\$2,415	\$0
Innovative Pressure Technologies, LLC	\$0	\$0	\$27,786	\$27,786
Insinger Machine Company	\$0	\$0	\$24,468	\$24,468
Integrated Management Solutions, Inc.	\$0	\$0	\$41,397	\$41,397
Integrated Microwave Technologies, LLC	\$0	\$0	\$879	\$423
International Business Machines Corporation	\$0	\$0	\$8,778	\$8,778
Iron Mountains, LLC	\$0	\$0	\$144,272	\$2,752
ITT Corporation	\$0	\$0	\$7,032	\$7,032
J.L. Clark, Inc.	\$0	\$0	\$205	\$0
J.R. Peters, Inc.	\$0	\$0	\$5,345	\$5,345
J2 Medical, LP	\$0	\$0	\$8,891	\$2,168
Jamestown Paint Company	\$0	\$0	\$1,796	\$1,796
Jazz Pharmaceuticals Commercial Corp. (f/k/a Azur Pharma, Inc.)	\$0	\$0	\$14,639	\$14,639
JIT Prototyping, LLC	\$0	\$0	\$135	\$0
JLG Industries, Inc.	\$0	\$0	\$28,658	\$0
John Paul Mitchell Systems	\$0	\$0	\$3,920	\$3,920
Johnson McCormick Technologies, LLC	\$0	\$0	\$3,206	\$3,206
Juniata Fabrics, Inc.	\$0	\$0	\$8,862	\$8,862
JW Kitko & Sons Wood Products, Inc.	\$0	\$0	\$235	\$0
Kalas Mfg, Inc.	\$0	\$0	\$13,711	\$24
KCF Technologies, Inc.	\$0	\$0	\$5,543	\$5,543
KD Industries, Inc.	\$0	\$0	\$100,537	\$0
Kenexa Corporation	\$0	\$0	\$13,581	\$13,581
Keymatrix, Inc.	\$0	\$0	\$2,771	\$0
Keystone Abrasives Co.	\$0	\$0	\$303	\$303
Keystone Foods, LLC	\$0	\$0	\$26,940	\$26,940
Keystone Nano, Inc.	\$0	\$0	\$16,459	\$16,459
Knopp Neurosciences, Inc.	\$0	\$0	\$365,504	\$365,504

Taxpayer Name	2012 Credit Awarded	2012 Credit Utilized¹	2010 & 2011 Credit Awarded	2010 & 2011 Credit Utilized¹
Komax Solar, Inc.	\$0	\$0	\$99,865	\$58,254
Kuhn Tool & Die Co.	\$0	\$0	\$10,492	\$468
Lake Tool, Inc.	\$0	\$0	\$1,287	\$1,287
Landslide Technologies, Inc.	\$0	\$0	\$46,440	\$48
Latrobe Specialty Metal Company (f/k/a Latrobe Specialty Steel Company)	\$0	\$0	\$39,955	\$31,994
Lee-Simpson Associates, Inc.	\$0	\$0	\$6,516	\$6,516
Lehigh Valley Technologies, Inc.	\$0	\$0	\$1,415	\$0
Levan Machine Co., Inc.	\$0	\$0	\$6,007	\$6,007
Lightwire, Inc. (c/o Cisco Systems, Inc.)	\$0	\$0	\$288,037	\$185,983
Lincoln Contracting Equipment Co., Inc.	\$0	\$0	\$3,163	\$3,163
Listrak, Inc. (f/k/a Remark Internet, Inc.)	\$0	\$0	\$26,649	\$26,022
LL Kurtz Manufacturing, Inc.	\$0	\$0	\$9,351	\$9,351
Local Focal, Inc.	\$0	\$0	\$4,779	\$4,779
LWI & Associates, Inc.	\$0	\$0	\$288	\$0
Mallet and Company, Inc.	\$0	\$0	\$2,137	\$2,137
Maloney Plastics, Inc.	\$0	\$0	\$3,072	\$3,072
Maloney Tool & Mold, Inc.	\$0	\$0	\$70,731	\$70,731
MapQuest PA, Inc. (f/k/a Digital City, Inc.)	\$0	\$0	\$89,865	\$0
Marvell Semiconductor, Inc.	\$0	\$0	\$277	\$277
Materion Brush, Inc. (f/k/a Brush Wellman, Inc.)	\$0	\$0	\$2,692	\$887
Matrix Operations Company, LLC	\$0	\$0	\$14,650	\$0
MBF Therapeutics, Inc.	\$0	\$0	\$14,967	\$14,967
McCormick Taylor, Inc.	\$0	\$0	\$8,951	\$8,951
MCI Communications Services, Inc.	\$0	\$0	\$9,681	\$9,681
M-Dot, Inc.	\$0	\$0	\$7,140	\$7,140
Medical Products Laboratories, Inc.	\$0	\$0	\$893	\$261
MEDRAD, Inc.	\$0	\$0	\$210,774	\$210,774
Melior Discovery, Inc.	\$0	\$0	\$56,545	\$56,545
MESH, Inc.	\$0	\$0	\$28,292	\$10,802
Met Pro Corporation	\$0	\$0	\$8,334	\$8,334
Metronome Labs, LLC	\$0	\$0	\$24,219	\$13,058
Micromechatronics, Inc.	\$0	\$0	\$10,928	\$10,928
Multimodal Technologies, Inc.	\$0	\$0	\$65,533	\$13,569
Mutual Pharmaceutical Company, Inc.	\$0	\$0	\$97,100	\$97,100
NanoHorizons, Inc.	\$0	\$0	\$12,730	\$12,730
NMS Labs, Inc. (f/k/a National Medical Services Biopharma, LLC)	\$0	\$0	\$65,529	\$39,324
NCA Technologies, Inc.	\$0	\$0	\$17,192	\$17,192
Neuro Kinetics, Inc.	\$0	\$0	\$13,778	\$13,778
Neurointerventional Therapeutics, Inc. (dba Neurointerventions, Inc.)	\$0	\$0	\$32,057	\$0
New Pig Corporation	\$0	\$0	\$17,573	\$17,573
Newage Testing Instruments, Inc.	\$0	\$0	\$7,573	\$7,573
NewCare Solutions, LLC	\$0	\$0	\$58,893	\$23,915
Nexus Pharma, Inc.	\$0	\$0	\$2,143	\$365
Nitor Technologies, Inc.	\$0	\$0	\$1,088	\$1,088
NKT, Co. (f/k/a Nielsen-Kellerman Co.)	\$0	\$0	\$25,070	\$25,070
OmniWind Energy Systems, LLC	\$0	\$0	\$61,820	\$61,820
Onconova Therapeutics, Inc.	\$0	\$0	\$2,564	\$2,564
Orthovita, Inc.	\$0	\$0	\$10,475	\$10,475
Outsourcing USA	\$0	\$0	\$2,641	\$0
Oven Industries, Inc.	\$0	\$0	\$15,029	\$15,029
Oxford Bio-Imaging Research, Inc.	\$0	\$0	\$39,793	\$39,793
P.H. Glatfelter Company	\$0	\$0	\$72,557	\$72,557

Taxpayer Name	2012 Credit Awarded	2012 Credit Utilized¹	2010 & 2011 Credit Awarded	2010 & 2011 Credit Utilized¹
Packaging Specialists, LLC	\$0	\$0	\$2,630	\$2,630
Parker White Metal Company	\$0	\$0	\$13,733	\$0
Penn Metal Stamping, Inc.	\$0	\$0	\$24,797	\$24,053
Pennsylvania-American Water Company	\$0	\$0	\$6,286	\$6,286
Pepperidge Farms Incorporated	\$0	\$0	\$4,053	\$0
Pfizer, Inc.	\$0	\$0	\$9,286,775	\$7,633,974
Pharmaceutical Manufacturing Research Services, Inc.	\$0	\$0	\$34,574	\$34,574
Philadelphia Tramrail Enterprises, Inc.	\$0	\$0	\$11,838	\$2,352
PHW, Inc.	\$0	\$0	\$2,646	\$2,646
Pioneer Hi-Bred International, Inc.	\$0	\$0	\$32,736	\$32,736
Pittsburgh African Venture Partners, LLC	\$0	\$0	\$7,686	\$4,533
PM Computing, Inc.	\$0	\$0	\$274	\$274
Polymetric Systems, Inc.	\$0	\$0	\$7,164	\$3,010
Portec Rail Products, Inc.	\$0	\$0	\$2,549	\$2,549
Portico Systems of Delaware, Inc.	\$0	\$0	\$80,608	\$26,950
Power & Industrial Srv Corp. (Donora Industrial Park)	\$0	\$0	\$24,366	\$24,366
Power Conversion Technologies, Inc.	\$0	\$0	\$10,980	\$10,980
Precision Ctg Tech & Mnfg, Inc.	\$0	\$0	\$3,671	\$3,226
Pride Mobility Products Corporation	\$0	\$0	\$24,951	\$7,921
Process Combustion Corporation	\$0	\$0	\$98,210	\$45,296
ProSanos Corporation	\$0	\$0	\$2,611	\$859
Pro-Soft Technologies, Inc.	\$0	\$0	\$5,874	\$5,874
PTR Group, LP	\$0	\$0	\$18,474	\$18,474
PuriCore, Inc.	\$0	\$0	\$19,544	\$19,544
Pyrotek Incorporated	\$0	\$0	\$443	\$443
Qadalyt, LLC	\$0	\$0	\$8,135	\$22
QR Pharma, Inc.	\$0	\$0	\$56,398	\$56,398
Quality Engineering Solutions, Inc.	\$0	\$0	\$14,108	\$3,957
Rampart Hydro Services, Inc.	\$0	\$0	\$5,016	\$4,966
Reading Alloys, Inc.	\$0	\$0	\$7,893	\$7,893
Reading Pretzel Machining Corp. (dba Reading Bakery Systems)	\$0	\$0	\$29,075	\$11,679
Rearick Tooling, Inc.	\$0	\$0	\$3,545	\$2,754
Rebco, Inc.	\$0	\$0	\$25,438	\$25,438
Recro Pharma, Inc.	\$0	\$0	\$86,773	\$0
Regeneron Pharmaceuticals, Inc.	\$0	\$0	\$15,282	\$1,691
Reinsel Kuntz Leshner, LLP	\$0	\$0	\$5,238	\$5,238
Renaissance Nutrition, Inc.	\$0	\$0	\$4,456	\$4,456
Richardson Cooling Packages, LLC	\$0	\$0	\$5,610	\$734
Riggs Industries, Inc.	\$0	\$0	\$225	\$167
Robert Bosch Tool Corporation	\$0	\$0	\$5,386	\$5,386
Rockland Immunochemicals, Inc.	\$0	\$0	\$13,655	\$13,655
Ross Mould Incorporated	\$0	\$0	\$39,330	\$39,330
Ross Technology Corporation	\$0	\$0	\$26,637	\$26,617
Russell Biotech, Inc.	\$0	\$0	\$3,104	\$3,104
S&S X-Ray Products, Inc.	\$0	\$0	\$2,564	\$903
Saladax Biomedical, Inc.	\$0	\$0	\$1,106	\$0
Samtec, Inc.	\$0	\$0	\$26,594	\$7,351
Schell Games, LLC	\$0	\$0	\$18,669	\$2,022
Schneider, Inc.	\$0	\$0	\$1,882	\$1,558
Scientific Systems, Inc.	\$0	\$0	\$587	\$587
Sealstrip Corporation	\$0	\$0	\$615	\$615
Sentry Data Systems, Inc.	\$0	\$0	\$1,271	\$946
Shire Pharmaceuticals, Inc.	\$0	\$0	\$228,422	\$228,422
Silverstorm Technologies, Inc.	\$0	\$0	\$184,306	\$0

Taxpayer Name	2012 Credit Awarded	2012 Credit Utilized¹	2010 & 2011 Credit Awarded	2010 & 2011 Credit Utilized¹
Sim Ops Studios, Inc.	\$0	\$0	\$9,338	\$9,338
Smart Structures, Inc.	\$0	\$0	\$435	\$0
SmoothOn, Inc.	\$0	\$0	\$6,750	\$6,750
Snap-tite, Inc.	\$0	\$0	\$3,638	\$3,638
Spinworks, LLC	\$0	\$0	\$15,626	\$15,626
Spring City Electrical Mfg. Co.	\$0	\$0	\$623	\$623
STC Consulting, LLC	\$0	\$0	\$18,040	\$18,040
Stein Seal Company	\$0	\$0	\$38,973	\$38,973
ST-Ericsson, Inc.	\$0	\$0	\$2,234	\$0
Strata Company (f/k/a Strata Graphics, Inc.)	\$0	\$0	\$2,872	\$2,872
Strategic Polymer Sciences, Inc.	\$0	\$0	\$45,009	\$45,009
Streamlight, Inc.	\$0	\$0	\$15,619	\$15,619
Sun Star, Inc.	\$0	\$0	\$10,509	\$10,509
Supelco, Inc.	\$0	\$0	\$33,249	\$33,249
Super Abrasive Machine Innovations, LLC	\$0	\$0	\$57,299	\$57,299
Surface Chemistry Discoveries, Inc.	\$0	\$0	\$1,480	\$0
Sweet Street Desserts, Inc.	\$0	\$0	\$47,160	\$18,577
Synerge, LLC	\$0	\$0	\$5,299	\$5,299
Tactical Technologies, Inc.	\$0	\$0	\$4,673	\$0
TDY Industries, Inc.	\$0	\$0	\$6,604	\$6,604
Technology Patents & Licensing, Inc.	\$0	\$0	\$1,501	\$1,501
TekResults, Ltd.	\$0	\$0	\$109	\$109
TeleTracking Technologies, Inc.	\$0	\$0	\$15,770	\$15,770
Tengion, Inc.	\$0	\$0	\$4,251	\$4,251
The Fredericks Company	\$0	\$0	\$1,529	\$1,529
The Loomis Company	\$0	\$0	\$357	\$357
The Magnus Group, Inc. (dba Progressive Information Technologies)	\$0	\$0	\$7,463	\$7,463
Thermal Therapeutic Systems, Inc.	\$0	\$0	\$30,013	\$30,013
Thermal Transfer Corporation	\$0	\$0	\$4,051	\$4,051
ThreeRivers 3D, Inc.	\$0	\$0	\$3,448	\$3,448
TM Industrial Supply, Inc.	\$0	\$0	\$3,303	\$3,303
Topflight Corporation	\$0	\$0	\$777	\$0
Towercare Technologies, Inc.	\$0	\$0	\$23,511	\$23,511
TPLZ, LLC (f/k/a IGD Systems, LLC)	\$0	\$0	\$26,681	\$26,681
Tray-Pak Corporation	\$0	\$0	\$1,659	\$1,659
Urban Engineers, Inc. (f/k/a Urban Engineers, Inc. & Subsidiaries)	\$0	\$0	\$5,487	\$5,487
Valley Instrument Co., Inc.	\$0	\$0	\$4,236	\$442
Verizon Corporate Resource Group, LLC	\$0	\$0	\$21,986	\$0
Vertex, Inc.	\$0	\$0	\$47,316	\$23,429
Video Display Corporation	\$0	\$0	\$5,895	\$4,281
Videon Central, Inc.	\$0	\$0	\$25,904	\$15,377
Vigon International, Inc.	\$0	\$0	\$287	\$287
Visual Composites, LLC	\$0	\$0	\$556	\$556
VT Graphics, Inc.	\$0	\$0	\$6,810	\$3,661
W.W. Patterson Company	\$0	\$0	\$1,105	\$1,105
Wabtec Corporation	\$0	\$0	\$4,663	\$4,663
Washington Penn Plastics Co., Inc.	\$0	\$0	\$92,724	\$38,454
Watson Standard Adhesives Company	\$0	\$0	\$13,112	\$0
Watson Standard Company	\$0	\$0	\$2,995	\$0
Weaver Industries, Inc.	\$0	\$0	\$3,644	\$3,644
Weiler Corporation	\$0	\$0	\$4,030	\$3,614
WER Corporation	\$0	\$0	\$3,700	\$3,700
West Penn Oil Company, Inc.	\$0	\$0	\$3,728	\$3,728

Taxpayer Name	2012 Credit Awarded	2012 Credit Utilized¹	2010 & 2011 Credit Awarded	2010 & 2011 Credit Utilized¹
West Pharmaceutical Services, Inc. (PA)	\$0	\$0	\$94,521	\$25,015
Whirley Industries, Inc.	\$0	\$0	\$401	\$401
White Engineering Surfaces Corporation	\$0	\$0	\$21,922	\$69
Whitford Corporation	\$0	\$0	\$17,432	\$3,597
Workhorse Rail, LLC	\$0	\$0	\$1,049	\$1,049
World Electronics Sales and Service, Inc.	\$0	\$0	\$6,554	\$3,549
Y-Carbon, Inc.	\$0	\$0	\$63,388	\$63,388
York Container Company	\$0	\$0	\$16,461	\$12,022
York Laboratories, LLC	\$0	\$0	\$4,369	\$0
Zulama, LLC	\$0	\$0	\$29,673	\$0
TOTAL	\$55,000,000	\$0	\$73,000,000	\$46,224,129

Footnote:

¹ "Utilized" means that the tax credit has been applied in full or partial payment of a tax liability according to the records of the Department. If no tax liability exists for the tax and period where the credit has been applied or if previous tax credits exceed the tax liability, the utilized amount is shown as zero. Until a tax year has been closed, it is possible that the tax credits indicated as being utilized may still be transferred, sold or assigned at the option of the taxpayer. Pass through credits and unused credits that were sold or assigned are also included as utilized.